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study is designed to see the in hospital prognosis/outcome among the survivors after streptokinase therapy on the basis of ST-segment resolution criteria.

Materials & methods

This clinical trial was conducted in cardiology unit of MAG Omani Medical College Hospital, Sylhet during the period from May 2005 to October 2006 to assess the resolution pattern of acute MI cases following streptokinase administration and also to find out the determinants of incomplete resolution. A total 57 patients of acute MI from January to June 2006 were selected consecutively for the study. Patients of ST elevation MI and/or typical ischemic chest pain lasting for > 30 minutes were included in the study. The exclusion criteria that prevented patients from participating were late presentation (admitted in the hospital 12 hours after onset of chest pain), recent (within 1 year) streptokinase therapy, any major surgery within 3 months prior to the current attack, haemorrhagic stroke, haematological disorders and history of active bleeding from peptic ulcer. Keeping compliance with Helsinki Declaration for Medical Research Involving Human Subjects 1964, informed consent was obtained from all cases participated in the study. Streptokinase was given to each case in a dose of 1.5 mu, diluted in 100 ml of normal saline, in 1 hour. Resolution was measured in terms percentage of reduction of ST elevation at 90 minutes following streptokinase infusion. Resolution > 70% was termed complete resolution, 70 — 30% incomplete resolution and < 30% as failed resolution. However, to find the determinants of resolution incomplete and failed resolution were considered together under one category as incomplete. Data were collected on variables of interest using a structured questionnaire. Data presented on categorical scale were analyzed with the help of descriptive statistics, Chi-square *($\%^2$)* Test, Fisher's Exact Probability Test, while the data measured on continuous scale were analyzed using Mann Whitney 'U' Test. For all comparative analyses $p < 0.05$ was considered significant.

Result

Data analysis showed that the mean age of the patient were 50.8 ± 9.8 years. Nearly 40% of the study cases fell between 40 - 50 years of age followed by 36.8% between 50 - 60 years, 12.3% between 60 - 70 years. Very few cases were between 30 - 40 year (5.3%) and 70 years or more (7%). A male preponderance was observed (94.7%) giving a male-female ratio of 18:1. Assessment of Body Mass Index (BMI) shows that majority (80.7%) of the cases had normal BMI, 8.8% were under-weight, another 8.8% over-weight and only 1(1.8%) case was obese (Table I). The mean BMI is 22.9 ± 3.4 Kg/m^2. The resolution pattern of the cases following streptokinase infusion shows that 21(36.8%) exhibited complete resolution, 33(57.9%) incomplete resolution and the rest 3(5.3%) failed resolution (Fig. 1). Analyses of determinants of resolution demonstrated that 14.3% of the complete resolution group had age below 40 years, where as none of the incomplete resolution group was found in the same age category suggesting that earlier age favors better resolution response ($p = 0.045$). No other demographic variable was revealed to be as determinants of resolution. Among the systemic diseases and risk factors studied like HTN, DM, smoking, dyslipidaemia and family history of CAD, none was found to be associated with resolution response ($p > 0.05$). History past MI was not found to be associated with resolution. However, the site of infarction seemed to have influenced the resolution pattern. Frequency of inferior MI was observed to be significantly higher and that of anterior MI significantly less in complete resolution (57.1% and 4.8% respectively) compared to those in incomplete resolution (30.6% and 33.3% respectively) ($p = 0.048$ and $p = 0.012$ respectively). Streptokinase given within 6 hours of chest pain showed better result, although it did not turn to significant (Table II). Among the biochemical variables, none but serum glucose level was found to be associated with incomplete resolution. The median serum glucose level of incomplete resolution group was significantly higher (6.4 gm/dl) than that of complete resolution (5.8 gm/dl) ($p = 0.010$) (Table HI). The groups were not found to be statistically heterogeneous with respect to any of the streptokinase-related complications like hypotension, shock, arrhythmia and haemorrhagic manifestation ($p > 0.05$) (Table IV). No significant variation was observed between complete and incomplete resolution in terms of outcome measures as well ($p > 0.05$) (Table V).

Table I. Demographic and anthropometric characteristics of the study cases (n = 57)

Characteristics	No	%
Age (yrs)	03	5.3
30-40	22	38.6
40-50	21	36.8
50-60	07	12.3
60-70	04	7.0
>70	54	94.7
Sex	03	5.3
Male	46	80.7
Female	05	8.8
BMI (kg/M²)**	05	8.8
Normal (18.5-24.9)	01	1.8
Underweight (< 18.5)		
Over-weight (25.0 - 29.9)		
Obese (30.0 - 39.9)		

***Mean age** = (50.8 + 9.8) yrs; **range:** (30 - 80) yrs. **Mean BMI = (22.9 + 3.4) kg/M"; **range:** (16.0 - 38.5) kg/M².

Fig. 1: Distribution of cases by resolution status (n = 57)

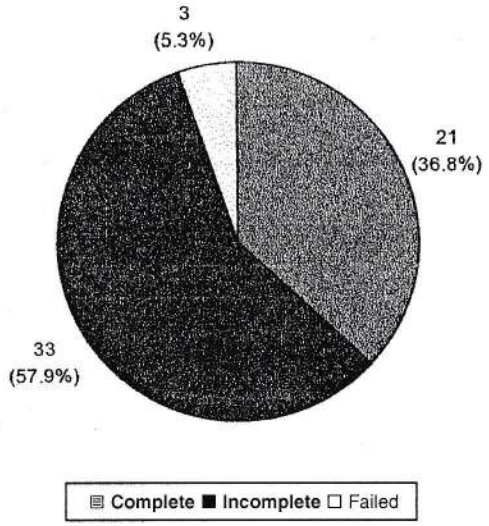

Table II. Determinants of resolution following streptokinase infusion (n = 57)

Determinants	Resolution status		p-value
	Complete (n = 21)	Incomplete (n = 36)	
Demographic variables:			
Age(30-40yrs)#	3(14.3)*	00	0.045s
Sex (male/female) *	20/1	34/2	0.696
Duration of pain (> 6 hours)"	2(9.5)	10(27.8)	0.261
Risk factors:			
Smoking*	18(85.7)	28(77.8)	0.357
HTN*	6(28.6)	7(19.4)	0.317
DM	1(4.8)	7(19.4)	0.124
Family history of CAD	1(4.8)	5(13.9)	0.272
Dyslipidemia	1(4.8)	4(11.1)	0.385
Types of MI:			
History of previous MI	2(9.5)	00	0.132
Extensive Anterior MI	3(14.3)	6(16.6)	0.436
jj Anterior MI	1(4.8)	12(33.3)	0.012s
Anteroseptal MI*	3(14.3)	7(19.4)	0.456
Inferior MI "	12(57.1)	11(30.6)	0.048s
Fibrinolytic therapy:			
Streptokinase (given within 6 hours) ^	17(81.0)	25(69.4)	0.341

* Figures in the parentheses denote corresponding %; S = Significant.
# Data were analysed using **Fisher's Exact Test;**
f Data were analysed with the help of **Chi-square** (x^2) **Test.**

Table III. Association between biochemical variables and resolution (n = 57)

Determinants	Resolution status: Complete (n = 21)	Incomplete (n = 36)	p-value
Biochemical variables;			
Serum glucose (mmol/L)	5.8(4.7-14.4)	6.4(3.9-17.5)	0.010[s]
Cholesterol (mg/dl))	191(120-318)	192.5(130-271)	0.485
Triglyceride (mg/dl))	165(59-910)	146(80-301)	0.348
HDL (mg/dl))	35(20-55)	36(24-48)	0.373
LDL (mg/dl))	42(70-176)	126(51-212)	0.495

Data were analysed with the help **Mann Whitney 'U' Test** and presented as **median (range).**

Table IV. Streptokinase infusion related complications (n = 57)

Complications	Resolution status: Complete (n = 21)	Incomplete (n = 36)	p-value
Hypotension*[1]	8(38.1)*	10(27.8)	0.419
Shock #	1(4.8)	00	0.368
Arrythmia*	3(14.3)	1(2.8)	0.136
Haemorrhagic manifestation*	00	1(2.8)	0.632

* Figures in the parentheses denote corresponding %.
# Data were analysed using **Fisher's Exact Test.**

Table V. Comparison of in-hospital outcome between complete and incomplete resolution (n = 57)

Outcomes	Resolution status: Complete (n = 21)	Incomplete (n = 36)	p-value
Post MI angina^*	00	3(8.3)	0.244
Hypotension"	2(9.5)	5(13.9)	0.486
Arrythmia*	1(4.8)	00	0.368
Cardiogenic shock*	2(9.5)	00	0.132

* Figures in the parentheses denote corresponding %; S = Significant.
# Data were analyzed using Fisher's Exact Test.
f Data were analyzed with the help of Chi-square (x^2) Test.)

Discussion

The demographic variables of our present study are comparable with other study of home and abroad[14]. Fibrinolytics restores coronary TIMI 2/3 flow at 90 minutes in 50% - 85% patients with ST elevation MI[15] and declared as successful, whilst reperfusion is unsuccessful in approximately 25% of patients and early reocclusion occur in further 10%[n].using the resolution criteria of reduction of at least 50% of the initial ST segment elevation on a follow-up ECG 60 to 90 minutes after initiation of therapy[12]. In a recent comparison study of ST segment resolution by throbolytics vs. PCI showed the resolution of ST segment by thrombolytics are as follows complete 51.9%, incomplete 26.6% and no resolution in 21.5% by using the criteria of resolution >70% of ST elevation as complete recovery, 30% - 70% ST elevation as incomplete recovery and <30% of ST elevation as no resolution after 90 minutes of initiation of thrombolytic therapy [13]. Using the same resolution criteria, in our study 36.8% patients show complete resolution, 57.9% patients incomplete resolution and only 5.3% shows no resolution. However the study shows a disparity in ST segment resolution pattern from complete to nil possibly due to smaller sample size and/or infarct site. Complete resolution is more frequent in inferior MI (57.1%) than anterior MI (4.8%). Among biochemical variables serum glucose level is significantly low in complete resolution group (p—0.01). Anaphylaxis, intracranial haemorrage is the most serious complication of the fibrinolytic therapy. Myocardial rupture, pump failure, cardiogenic shock, aortic dissection, splenic rupture, cholesterol embolization are reported in different journals[16'17'18]. In the present study hypotension was the major complication 38.1% vs. 27.8% and hemorrhage was least 0% vs. 2.8%. In comparison among inhospital out come, chest pain and hypotension was less frequent in the complete resolution group. There is mean difference between the two groups although it is not statistically significant as the sample size is comparatively small. Persistence of chest pain, absence of ST segment resolution and haemodynamic and electrical instability are indicators of failed thrombolysis and the need for rescue PCI[12].

Conclusion

The study observes that age below 40 years, lower serum glucose level and inferior MI favor streptokinase-induced resolution. In a tertiary level hospital where PCI facilities is not available ST segment resolution criteria could be used to assess and categorize patients according to level of resolution, like complete, incomplete and no resolution, in conjunction with clinical assessment of the patient and to refer to centre where PCI facilities are available. It is recommended to conduct such a study with large population with random sampling.

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ORIGINAL ARTICLE

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Thyroid Diseases: Surgical Experinece In BSMMU

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Introduction

Thyroid diseases are treated eighter medically or surgically or combinations of both[1]. Toxic or nontoxic nodule, nontoxic or toxic Multi Nodular Goilre (MNG) & malignancy are treated surgically[3'6]. Different surgical options in thyroid diseases are hemithyroidectomy, subtotal ihyroidcctomy, and total thyroideclomy with or without neck dissection [2>5i8t9]. Before going to surgical treatment of toxic nodule or toxic multi nodular goitre, patient must be eutbyroid[s]. The objective of the present study was to assess different types of surgery done on different types of thyroid diseases in surgical ward, BSMMU, Dhaka.

Materials And Methods

It is prospective study done in surgical department in BSMMU from January 2000 to July 2005. 207 patients were treated surgically and all patients were evaluated clinically, Diagnosis was done by history, physical examination, investigations. Diagnosis confirmed by histopathological examination.

Patients were divided into 5 groups-

(1) Solitary thyroid nodule (STN)
(2) Nontoxic MNG.
(3) Toxic MNG
(4) Toxic nodule
(5) Malignancy.

1. Assistant Professor, Surgery, BSMMU.
2. Assistant Professor, Surgical Oncology, BSMMU.
3. Assistant Professor, Surgery, BSMMU.
4. Assistant Professor, Surgery, BSMMU.
5. Consultant, Surgery. BSMMU.
6. Consultant, Surgery. S.S.A.H

Types of surgery performed-hemithyroidectomy, Sub-total thyroidectomy, total thyroidectomy, total thyroklectomy with functional neck dissections. Post operatively all patients were followed up after 4 weeks for evaluations of patient by history, examination and thyroid hormone status.

Results

Age distribution of patient between 13-75 years and majority are 31-40 years of age (Table-1). Among the study population, female were predominance (Table-2). In this study types of thyroid diseases were highest in MNG (60%) and others are STN (14%), toxic MNG (5%) toxic nodule (3%), Papillary Carcinoma with or without regional lymph node (9%), Follicular Carcinonn (8%), Lymphoma (1%) (Table-3). All the patients were treated surgically. Types of surgery were done are hemithyroidectomy (22%), Sub-total thyroidectomy (68%), ToUi[thyroidectomy only (8.5%), Total thyroidectomy with functional neck dissection (1.5%). In table 5 15% patients developed complications like hemorrhage (8%), RLN paulsy (2%), hypothyroidsm (3%) hypocalcaemia (2%).

Table-1: Age distribution of study population (u=207).

	Nos.	Percentage
10-20	4	2%
21-30	51	24.5%
31-40	91	44%
41-50	34	16.5%
51-60	17	8%
61-70	4	2%
71 -above	6	3%

Table-2: Sex distribution of study population (n=207).

Female	143	70%
Male 64		30%

Table-3: Types of thyroid diseases (11 = 207).

Multinodular goitre	124	60%
Solitary thyroid module	29	14%
Toxic MNG	10	5%
Toxic module	6	3%
Papillary Carcinoma thyroid with or without regional L.N.	19	9%
Follicular Ca-thyroid	17	8%
Lymphoma	2	1%

Table-4: Types of surgery done: (11=707)

Hemithyroidectomy	44	22%
Sub-total thyroidectomy	140	68%
Total thyroidectomy	17	8.5%
Total thyroidectomy with functional	4	1.5%
neck dissection		

Table-5: Complications after surgery (n=207).

Haemorrhage	16	8%
Recurrent laryngeal, Nerve palsy	4	2%
Hypothyroidism	6	3%
Hypocalcaemia	4	2%

Discussion

Thyroid swelling are nearly 3 times commoner in female than male, which is nearly consistent with other studies[4]. Highest number of patients MNG (60%), which were diagnosed by history, exuminaiion, investigations and determined the indications of surgery [1>9]. In our study subtotal thyroidectomy done (68%) for MNG, Toxic nodule, toxic MNG[1'9] in throughout world[1'''9]. Hemithyroidectomy (22%), done in case of STN and Follicular carcinoma which is correlated with other studies [1,5,8,9]

In our study TMN (5%) & TN (3%) were diagnosed by history, clinical examination, investigations & patient become cuihyrold by antithyroid drugs. Subtotal throidectomy was done, which were carried out in many studies[6] .

Total thyroidectomy was done for papillary carcinoma of thyroid in 15 cases, Lymphoma in 2 cases, which were related with oilier studies [1,2'5'9'10'11]. In 4 cases we carried out total thyroidectomy with funciion.il neck dissection for papillary carcinoma of thyroid with unilateral cervical Lymph node metastasis which were correlated with other studies ['5'] . Harls VM Russel et al shows after total thyroiedctomy with papillary carcinoma of thyroid were treated by Radio-iodine ablation at the end of 4 weeks.

Postoperative reactionary haemorrhage occurs in 16 patients, which is much higher in our studies. Recurrent laryngeal nerve injury during operation were noted 4(2%) cases of our study. Songun I, Kievit j et al [10] shows 3.4% of similar complications in their studies and also Haider A studies[12]. harls VM, lUissel et al shows subtotal thyroidectomy though removed all the pathological ti sues completely but there is a risk of hypothyroidism. Hypothyroidism developed as usually in all the cases of total thyroidectomy after 4 weeks of surgery & routinely, those cases were treated by life long thyroxine supplementation. In this study hypothyrodism dcv loped in 6 cases (3%), where 5 cases due to total thyroidectomy & 1 case due to subtotal thyroidectomy, which is nearly similar to above study. Hypocalcemia developed in 4 (2%) cases after total thyroidectomy which is lower than Songun I. Kievit-J el al study[10], Haider Amin[12] studies.

Conclusion

Thyroid diseases were higher in female than in male in the form of mostly MNG which were treated effectively hy subtotal thyroidectomy. STN & Follicular carcinoma was treated by hemithyroidectomy. In case of Toxic nodule & Toxic MNG, patient become euthyroid first

then treated by subtotal thyroidectomy and patient were strictly by followed up with suppressing dos \ In pupillary carcinoma and lymphoma with or without cervical lymph node involvement. Total thyroidectomy should be considered first line of treatment with or without function neek dissection respectively. Moreover, surgical removal of the bulk of thyroid tissue would decrease the administration of repeated multiple 1131 doses and there by avoid unnecessary whole body irradiation. Regular followed up for total and subtotal thyroidectomks :ire very much essential to encounter hormonal imbalance.

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ORIGINAL ARTICLE

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Topical Ciprofloxacin Versus Topical Gentamicin In The Medical Management Of Chronic Suppurative Otitis Media .

KAZI AKTAR UDDIN[1] AND HARUNUR RASHID[2]

Abstract

Objective: The objective of this clinical trial was to demonstrate the superiority of topical quinolones(ciprofloxacin) with the previously and commonly use aminoglycoside (gentamicin hydrocortisone,) ear drops.

Introduction

Active chronic suppurative otitis media (CSOM) and its squealae accounts for a major clinical workload in routine ENT practice in this locality. Topical antibiotics have been extensively used by the doctors in the medical management of CSOM, however, the choice was mainly confined to aminoglycosides only. In several recent clinical trials the use of topical quinolones has shown remarkable results in achieving dry ear. The objective of this clinical trial is to asses the efficacy of topical quinolones(ciprofloxacin) with hydrocortisone and compare it with the most commonly used aminoglycosides (gentamicin hydrocortisone) ear drops.

Materials and Methods

This trial was conducted on the patient presented with chronic ear discharge (to the outpatient) in two of the investigators chamber Irrespective of age, sex, and socio-economic background, 120 patients were recruited in this comparative clinical trial.

1. Assistant Professor, ENTD Department Sylhet M.A.G. Osmani Medical College
2. Associate Professor, ENTD Department Sylhet M.A.G. Osmani Medical College

The exclusion criteria were.

1. Patient with frank cholestaetoma, attic defect and marginal perforation
2. Pregnant and lactating patients
3. Patient with known sensitivity to aminoglycosides or quinolones
4. Patient thought to be unreliable for follow-ups

Inclusion criteria

Patient with tubotympanic type of c so m

A detailed history was taken and ENT examination was done in each patient. A swab for bacteriology was obtained before aural toileting, otoscopy done. Each patient was instructed to do proper aural toilet and advised to put the ear drops in supine position with the affected ear facing the ceiling followed by tragal rub for 5 minutes

Patients Were divided into two groups;

1 Aminoglycoside group of 60 patients were treated with gentamycin hydrocortisone ear drops, 3 drops in the affected ear three times a day for 14 days
1 Quinolone group of 60 patients were prescribed ciprofloxacin with hydrocortisone topical solution with a dose of 3 drops in the affected ear three times daily for two weeks and called for review on 14th day.

All the patients were followed in the chamber at 2 weekly intervals for one month. At each follow-up visit patients were asked about cessation or reduction in the discharge. Otoscopic examination was performed in each case to assess objectively the result of our treatment. Any adverse effects of these drops were recorded.

Results

This study of 120 patients presenting with ear discharge of six month to five years since childhood duration due to chronic suppurative otitis media were studied.

Majority of patients were between ages of 5 and 30 years.

Table 1.Age distribution.

n=120

Age	No	%
0 ---- 5 years	05	4.1666
5 ---- 10	40	33..333
10 ----- 15	30	25
15 ----- 20	20	16 666
20 --- 25	15	12 . 5
25 --- 30	10	8.333

Treatment outcome of both the groups on 14th day is shown in Table 1I. Subjective assessment was done by finding out the absence, reduction or no change in the discharge and objective assessment was done by otoscopy to check the presence and nature of discharge. In the aminoglycoside group in 30 patients complete cessation of the discharge occurred, while in the quinolone group 43 patients had their discharge stopped completely.

Table 11 Treatment out come complete cessation of aural discharge

Groups	Occured	Not occured	Total
Aminoglycoside group	30	30	60
Gentamycin hydrocortisone	43	17	60

Table 111 Bacterological report

n= 120

Name of organism (organism isolated)	No	%
Staphylo coccus aurius.	65	54. 166
Strepto pneumoni	24	20
Strepto pyogen	12	10
Pseudomonus	8	6.666
Haemophylus influengi	8	6.666
Klebsiella	3	2.5

Local itching was common complaint in both the groups (3 in aminoglycoside group and 2 in the quinolone group) whereas Candida growth was seen in the aminoglycoside group only (4/60).

Discussion

Chronic suppurative otitis media is a disease of discharge and deafness, continuing existence, acting gradually or without being notice, often leads to destructive changes and irreversible squeale4. Since the disease is very common in rural peoples of our country, due to thier low socioeconomic condition,poor living status, they are treated irregularly due to thier maltreatment complications occur. So there is prime need to have a modality of treatment, in the medical management of chronic suppurative otitis media, which is not only easily dispensible but also cheaper, and very effective in all age groups, also the danger of potential ototoxicity in using aminoglycosides like gentamicin and neomycin has given the idia for study to compare the topical quinolones with topical aminoglycoside in greater sylhet zone.

Our study of one hundred and twenty patients of various age groups suffering from chronic suppurative otitis media has shown the efficacy of topical aminoglycoside and topical quinolone.

Clinical studies over the last forty years have demonstrated the efficacy of antibiotic and antibiotic-steroid topical ear drops in the medical management of chronic suppurative otitis media. Before the advent of quinolones, aminoglycosides topical ear drops were considered to be the main source in the medical treatment of chronic suppurative otitis media. However, ototoxicity from topical solutions in the presence of a perforation has been in question for many years. The danger of potential ototoxicity in using aminoglycosides like gentamicin and neomycin necessitates a search for potentially safer alternatives. The potential of quinolones to be used as topical ear drops was realized by Todd et al15. Esposito et al applied generic topical ciprofloxacin with remarkable success in patients with active CSOM1. Several Japanese studies have reported the use of 0.3 % ofloxacin otic drops in children with purulent otitis media and otitis externa with a greater than 90% clinical response and a 93% bacterial eradication rate 2,16-18.

In our current study we used ciprofloxacin, in the quinolone group and gentamicin hydrocortisone drops

in aminoglycoside group. Ciprfloxacin exert its bactericidal action by inhibiting the activity of DNA gyrase which is necessary for bacterial DNA replication and therefore resulting in inhibition of bacterial DNA synthesis and DNA damage, antagonism of protein synthesis and rapid bacterial death 19.

The results of our study clearly show superiority of quinolones over aminoglycoside as the complete cessation of discharge was noted in 43. The over all success rate was 71.666 percent in the quinolone group and 30 in the aminoglycoside group. This result is similar to other earlier studies done worldwide 15,16,17,and18. Fungal growth was noticed in 4 patients among the aminoglycoside group and we believe this due to the steroid component of the gentamicin hydrocortisone ear drops.

Conclution

We recommend that in the medical management of chronic suppurative otitis media, the topical quinolones should be considered first line of treatment as there are no ototoxic effects of quinolones, which can be used safely in the presence of tympanic membrane perforation

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ORIGINAL ARTICLE

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Outcome of Trapezius transfer in abductor palsy of shoulder by modified Saha's technique.

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Abstract

a) Aim and objective : To evaluate the functional outcome of Trapezius transfer by modified Saha's technique in abductor palsy in post-polio residual paralysis and brachial plexus injury.

b) Methods : Between August 2002 to March 2006, 7 patients with abductor palsy of shoulder, 4 with post-polio residual paralysis and 3 with old brachial plexus injury (C5/6) underwent trapezius transfer in Sylhet MAG Osmani Medical College Hospital. There were 5 male (71.43%) and 2 female (28.57%) with a mean age of 24.5 years (16 to 35 years). Before operation, a full evaluation of muscle function in the affected arm was carried out. A completely flail shoulder found in 3 (42.86%). 5 patients (71.43%) had peripheral function of elbow and hand. No patients (100%) had full active abduction of shoulder Patients were followed up for mean of 1.8 years (8 months to 3 years). All operations were performed in modified Saha's technique.

Results : The transfer resulted in an increase of abduction function and 6 (85.71%) a decrease in multidirectional instability of the shoulder. The mean increase in shoulder abduction was from 0°-15° (mean 5°) to 45°-100° (mean 75°) at the last review. The mean forward flexion was increased from 10° (20°-55°) to 45° (50°-90°)

Abduction and forward flexion were greater when function of pectoralis major remained.

Conclusion : Trapezius transfer with a simple motification of the operative technique produces a satisfactory outcome as regards function and stability and gives subjective help to the patients.

Keywords : Trapezius transfer & abductor palsy of Shoulder.

Introduction

The deltoid, Supraspinatus, and teres major muscle show a power of MRC 0- 2 as a result of post-polio residual palsy, following unrecovered brachial plexus injury with C5/6 involvement. This results in reduced stability of shoulder with subluxation of humeral head together with less or limitation of abduction, forward flexion and external rotation. The trapezius, levator scapula and rhomboid must have power MRC 4 to 5 The biceps and triceps which arise from the scapula span the shoulder and elbow and insert into the bones of the forearm. The better result is achieved in patients with preoperative full power of these muscles. Muscle transfer operations are superior to shoulder fusion in

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terms of passive function and because of higher rates complications, longer duration of operation and irreversibility of arthrodesis. If muscle transfer fails arthrodesis can be undertaken but if arthrodesis fails no other option is available. The aim of the study is to evaluate the functional outcome of trapezius transfer in abductor palsy in post-polio residual paralysis and brachial plexus injury.

Patients and methods

This is the prospective study carried out in Sylhet MAG Osmani Medical College Hospital during the period of August 2002 to March 2006 over 7 patients with abductor palsy of shoulder, 4 with post-polio residual paralysis and 3 with old unrecovered brachial plexus injury (C5, C5,6) underwent trapezius transfer. The age range of 5 male and 2 female was 16 to 35 years (mean 24.5 years). Before surgery complete muscle status of the affected arm was evaluated according to MRC grading. The degree of joint instability was assessed by the translation of humeral head in relation to glenoid. Preoperative radiograph of shoulder were taken and inferior subluxation of the head was determined on film taken with the arm dependent. The patients were followed up for a mean of 1.8 years (8 months to 3 years.) The deltoid muscle must be completely paralysed and trapezius muscle is with full strength and passive shoulder abduction is at least 80°.

Operative technique :- The patient is placed in lateral decubitus position An incision was started from the medial border of scapula curving over the scapular spine upto acromion then 7.5 cm over the arm Trapezius muscle was mobilized from the upper border of crest. The deltoid was mobilized from lateral 3rd of clavicle, acromion and spine of scapula. The acromion and lateral 3rd of clavicle with insertion of trapezius separated by oblique ostrotomy leaving coracoacromial ligament intact. The proximal humorous was exposed by longitudinal splitting of deltoid and surface prepared for decortication. The acromion was transferred to humerous below greater tubersity and fixed with two 6.5 mm cancellous screw with shoulder 80° – 90° of abduction. Partially freed deltoid than sutured on the top of trapezius, where whose power than carried over to the humerous along the area of insertion of deltoid . The wound was closed. In layers with suction drain. The arm was immobilised in 80° abduction with plaster of paris for 6 weeks after which physiotherapy was started and progressive abduction begun.

Table – I

Patient's detail

Number	---	7 (100%)
Gender	M	5 (71.43%)
	F	2 (28.57%)
History		
Causes of lesion		
Post-polio residual paralysis		4
Birth injury	--	1
Motorcycle accident	---	1
Mean age	---	24.5 years (16-35 yrs)
Follow up	mean	1.8 years (8 month to 3 yrs)

Result : In all patients the transfer resulted in an increase of function and decrease in multidirectional instability of shoulder.

We achieved a mean increase of active abduction from 5° (0°-15°) before to 75° (45°-100°) after surgery. The mean increase in forward flexion from 10° (20°-55°) to 45° (50°-90°). There was no marked difference after surgery with mean defect of external rotation. There was marked reduction of multidirectional instability.

Radiologically inferior subluxation was improved in all cases. Subjective assessment of the operation by the patient was excellent in 2 (28.57%) , good in 3 (42.86%) and fair in 2 (28.57%) Overall in all cases improved stability and increase in function Complications included 1 (14.29%) superficial wound infection and 1 pressure sore by the abduction spica on the side of chest.

Table II

Overall result

Result	-	No	%
Excellent	-	2	28.57%
Good	-	3	42.86%
Fair	-	2	28.57%
Total		7	100%

Discussion

After abduction palsy of shoulder due to post-polio residual paralysis or brachial plexus palsy, trapezius transfer is indicated for the patient with multidirectional shoulder instability with or without subluxation or weak forward flexion caused by inadequacy of deltoid and supraspinatus muscles and leading to poor function of elbow and hand. The trapezius must have full strength against resistance.

Muscle transfer operations are superior to shoulder fusion in terms of passive function and because of higher rates of complications. Goldner[5] considered that arthrodesis regarded as final option and muscle transfer was the best option. In patient with complete lesion and those with no adequate function of elbow and hand, trapezius transfer is the optimum procedure to solve the particular problem. In other larger series about 40° of active abduction and forward flexion have obtained after trapezius transfer [1,9,13] and an additional aim is to abolish subluxation of humeral head.

Saha [15] described suture of the partially freed deltoid muscle on the top of the trapezius without tension after fixation of acromion. We sutured the deltoid under maximum tension on the trapezius muscle as far medially as possible. The power of the trapezius is carried over to the humerus via fibres of atrophied deltoid muscle particularly to the area of insertion of deltoid. The functional results of the present series do not differ much from those of previous publications [1,8,9,11,] ie. $P>0.05$.

Conclusion

Trapezius transfer for the flail shoulder with simple modification of operative technique using the atrophied deltoid to carry over the force of trapezius produces a satisfactory outcome as regards of function and stability and gives subjective help to patients. A further study with large number of samples with long duration follow up may reflect the actual outcome of operation.

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ORIGINAL ARTICLE

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Role of Histopathology in HBsAg-positive Chronic hepatitis

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Abstract

Objectives- This prospective study was conducted to evaluate the histopathological findings (in liver tissue obtained by percutaneous tru-cut needle biopsy) in HBsAg-positive chronic hepatitis patients. Biochemical and serological findings of these patients were also compared with histological findings to find out whether they correlate or not.

Materials and methods-

The liver tissue was obtained by percutaneous tru-cut needle biopsy. A total 75 patients of chronic hepatitis were included in this study from different hospitals of Dhaka city. Chronic hepatitis B (CHB) positive cases were grouped into three categories according to their HBeAg status and serum Alanine Aminotransferase (ALT) level- 1) HBeAg-positive CHB, 2) HBeAg-negative CHB with increased ALT activity (ALT-positive) and 3) HBeAg-negative CHB with normal ALT activity (ALT-negative).

Results

Intervention with interferon is done for HBeAg-positive cases and HBeAg-negative, ALT-positive cases, but not for HBeAg-negative, ALT-negative cases. Present study found no significant correlation among serological, biochemical and histological findings of CHB. HBeAg-negative, ALT-negative CHB patients are not treated with antiviral therapy, although at cellular level they may have histological activity, which was observed in this study.

Conclusion

Therefore, many patients are deprived of proper treatment if consideration is given only on serological and biochemical results, neglecting Histopathology.

Key word:

HBsAg-positive, Chronic hepatitis, histopathology.

Introduction

Symptomatic, biochemical ,or serologic evidence of continuing or relapsing hepatic disease for more than six months, optimally with histologically documented inflammation and necrosis is taken to mean chronic hepatitis [1]. Better insight into the etiology and pathogenesis of chronic hepatitis has brought about a shift of emphasis in the classification based on purely histopathological findings to a combination of histological, serological and clinical findings. This is particularly important because therapy that is effective in one form of chronic hepatitis may be ineffective or potentially detrimental in others .

The lesions of chronic hepatitis can be semi quantitatively assessed with reasonable accuracy and reproducibility using the Knodell scoring system [3]. It generates a histological activity index (HAI) on the basis of inflammation, necrosis, fibrosis and alteration of

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architecture. Four components of HAI are: peri portal necrosis with or without bridging necrosis (0-10), intralobular degeneration and focal necrosis (0-4), portal inflammation (0-4) and fibrosis (0-4). The first three parameters is the grade of the disease and the last parameter scores for the stage of the disease.

The classification of chronic hepatitis B (CHB) is based on the presence or absence of hepatitis B virus (HBV) replication and liver cell inflammation. HBV replication is commonly assessed by measuring hepatitis Be antigen (HBeAg) in serum, and liver cell inflammation from serum alanine aminotransferase (ALT). HBV replication is usually associated with increased ALT level, and absence of HBV replication with a normal ALT level. The presence of increased ALT activity with a negative HBeAg test points to low level HBV replication or concomitant diseases like hepatitis D, hepatitis C, hepatocellular carcinoma, alcoholism, autoimmunity drug toxicity or metabolic diseases. CHB can thus be categorized into- (1) HBeAg positive CHB, (2) HBeAg-negative CHB with increased ALT activity (ALT-positive), and (3) HBeAg-negative CHB with normal ALT activity (ALT-negative). Strategies for therapy are required for the first two groups but no therapy is indicated for the last group .

Chronic hepatitis is an important medical problem in Bangladesh [5]. Many physicians underestimate histological findings and avoid liver biopsy with the excuse that it is an invasive and expensive procedure and rely upon the serological and biochemical reports for the management of CHB patients.

Materials and methods

A total of 75 patients of different age and sex with clinical features of chronic hepatitis were included in this prospective study was carried out in the Department of Pathology, IPGM&R, Dhaka from November 1996 to June 1997. They were recruited from hepatology, gastroenterology and medicine units of IPGM&R, BIRDEM, DMCH and different clinics of Dhaka city. Of them, 61 HBsAg-positive patients with features of chronic hepatitis were taken as study group and 14 HBsAg-negative patients with similar presentation were taken as control group.

A detailed history was taken and a thorough clinical examination was carried out with particular emphasis on the hepatobiliary system. The sera were tested for HBsAg and HBeAg by ELISA method and serum ALT and albumin levels were determined. Liver tissue was collected by percutaneous biopsy using "Tru-cut" needle. Routine processing with paraffin impregnation was done and sections were stained with-

1) Routine staining with haematoxylin and Eosin (H&E).
2) In selected cases, special staining with Gomori's Reticulin stain to see fibrosis and with modified Orcein and Victoria Blue-Nuclear fast red stains to detect the HBsAg histologically.

The H&E stained slides were critically examined to evaluate histological features of chronic hepatitis. The intensity of the necro-inflammation and extent of fibrosis was scored by HAI (Knodell score).

Knodell scoring system (0-22) (Knodell et all, 1981)

A. Periportal +/- bridging necrosis

None	0
Mild piecemeal necrosis	1
Moderate piecemeal necrosis	3
Marked piecemeal necrosis	4

Moderate piecemeal necrosis with bridging necrosis	5
Marked piecemeal necrosis with bridging necrosis	6
Multilobular necrosis	10

B. Intralobular degeneration and focal necrosis

None	0
Mild	1
Moderate	3
Marked	4

C. Portal inflammation

No portal inflammation	0
Mild	1
Moderate	3
Marked	4

D. Fibrosis

No fibrosis	0
Fibrous portal expansion	1
Bridging fibrosis	3
Cirrhosis	4

Grading (Activity)= A+B+C

Staging (Fibrosis)= D

Score of grading (Activity)

Minimal activity	= 1-3
Mild activity	= 4-8
Moderate activity	= 9-12
Severe activity	= 13-18

Total Knodell score=Grading + Staging.

Observation and Results:

The aim of the present study was to evaluate the histopathological findings in HBsAg-positive chronic hepatitis patients and to correlate these with the proposed classification of CHB by Schalm et al., based on serological and biochemical findings. The extent of necro-inflammatory activity (grading) and fibrosis (staging) were studied by using Knodell scoring system.

The study group comprising of 61 HBsAg-positive patients were classified according to Schalm et al., into three groups and were designated as group I, II and III respectively. Their distribution is shown in Table-I.

Among the biochemical investigations serum ALT and albumin levels were determined. The results of analysis of sera are presented in Table-II.

Histological features of the seventy-five cases were scored and are presented as follows (table-III & IV). The pattern of hepatic architecture and extent of fibrosis were examined from reticulin stain (Table-IV).

The relationship between disease activity (grading) and serum ALT level was statistically analyzed, using correlation co-efficient test, where P value was <0.505, <0.45, <0.236 and <0.057 in group I, II, III and control group respectively. The relationship between extent of disease progression (fibrosis) and serum albumin level was statistically analyzed, using Correlation co-efficient test, where P value was <0.078, <0.624, <0.830 and <0.636 in group I, II, III and control groups respectively.

In the present study all the slides were stained with H&E stain and in selected cases with Gomori's reticulin, Orcein and Victoria Blue-Nuclear fast red stains. In H&E stain particular emphasis was given on the pattern of hepatic lobular architecture, necrosis, inflammation and fibrosis. Reticulin stain was done in twenty cases, which showed clearly the hepatic architecture and fibrosis. Reticulin fibres appeared black with this stain. Orcein stain was done in fifteen HBsAg-positive (study group) and five HBsAg-negative (control) cases. Fine dark brown granules in the cytoplasm were seen only in the study group. Victoria Blue-Nuclear fast red stain was done for the same fifteen and five cases respectively.

The study group only showed blue coloured surface antigen in the hepatocytes. So, both Orcein and Victoria Blue-Nuclear fast red stain were positive in the study group and negative in the control group.

Table-I

Distribution of sixty-one patients in different groups

Groups	Number of patients	Percentage
Group-I (HBeAg +ve)	38	62%
Group-II (HBeAg –ve, ALT +ve)	15	25%
Group-III (HBeAg –ve, ALT -ve)	08	13%
Total	**61**	**100%**

Table-II

Biochemical investigations in sera of chronic hepatitis patients

Group	No of patient	Serum ALT (U/L)			Serum Albumin (gm/L)		
I	38	112.52	±	109.812	36.95	±	7.362
II	15	71.437	±	44.745	39.06	±	7.159
II	08	26.854	±	8.876	35.090	±	7.700
Control	14	50.333	±	29.502	36.126	±	6.336

(Values represent mean ±SD)

Table-III

Activity (Grading) of liver biopsy specimens in Knodell score 18

Activity score	Group-I		Group-II		Group-III		Control Group	
	No	%	No	%	No	%	No	%
None (0)	00	000	0	000	0	000	00	000
Minimal (1-3)	15	39.5	5	33.3	4	50.0	10	71.4
Mild (4-8)	17	44.7	8	53.3	1	12.5	03	21.4
Moderate (9-12)	06	15.8	1	06.7	3	37.5	01	07.2
Severe (13-18)	00	000	1	06.7	0	000	00	000
Total	38	100.0	15	100.0	8	100.0	14	100.0

Table-IV

Staging (Fibrosis) of liver biopsy specimens in Knodell score 04

Score	Group-I		Group-II		Group-III		Control Group	
	No	%	No	%	No	%	No	%
0	05	13.2	01	6.7	1	12.5	04	28.6
1	21	55.2	08	53.3	3	37.5	06	42.9
3	05	13.2	06	40.0	1	12.5	01	07.1
4	07	18.4	00	000	3	37.5	03	21.4
Total	38	100.0	15	100.0	8	100.0	14	100.0

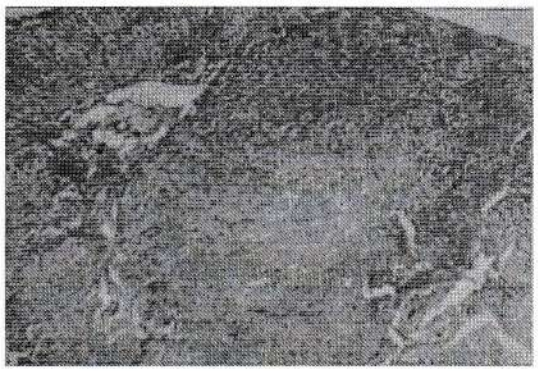

Figure-01: Mild portal inflammatory infiltrate. (Knodell score 5/18, 6/22) *H&E x122*

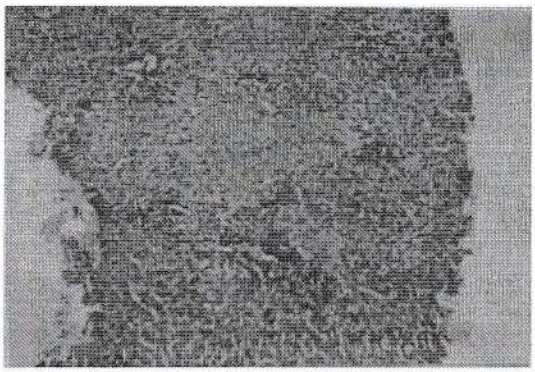

Figure-02: Moderate portal inflammatory infiltrate and mild focal necrosis. (Knodell score 2/18, 3/22) *H&E x122*

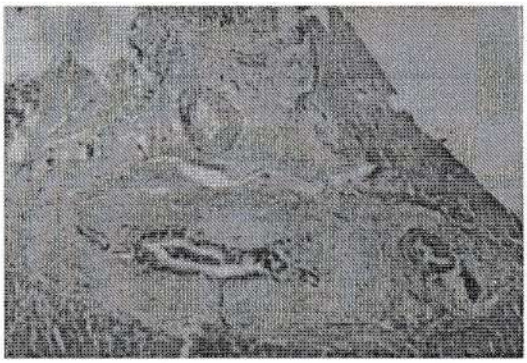

Figure-03: Fibrosis around portal tract. (Knodell score 1/18, 1/22) *H&E x122*

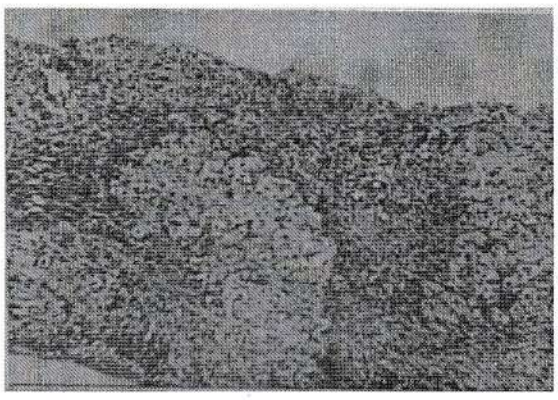

Figure-04: Marked portal inflammatory infiltrate with mild piecemeal necrosis. (Knodell score 8/18, 12/22) *H&E x122*

Discussion

Viral hepatitis is a cause of considerable morbidity and mortality in the human population both acute inflammation and from chronic sequelae of hepatitis B, which include chronic active hepatitis, cirrhosis and primary liver cancer . New insights in the molecular biology of the HBV and in virus/host interactions give support to a new classification of CHB. By necessity, the epidemiology of the three types of CHB has become a subject of great interest, since it provides the baseline for studies on intervention. During the past decades, different drugs have been studied as potential treatment for CHB. Except interferones, however, none has been proven to be effective. Immunosuppressive treatment is now being replaced by antiviral therapy. All forms (particularly alpha and beta) exert antiviral activity .

The prevalence of the three categories of CHB among HBsAg carriers has been estimated in various epidemiological studies. Worldwide prevalence shows 16 to 59 percent for group I, 7 to 30 percent for group II and 29 to 63 percent for group III . The present study has shown the frequency of these three types of CHB to be 62% 25% and 13% in group I, II and III respectively. It is observed that the frequencies of these three categories of CHB infection differs widely, depending upon the type of population, selection criteria and various factors that significantly influence the prevalence rates of HBeAg and antiHBe. Such factors include sex, age at acquisition and duration of HBV infection, homosexuality, drug addiction, immunosuppression and the presence of underlying liver disease. The observed difference in the prevalence rates of the three categories of CHB suggest that not only transition of CHB

infection from HBeAg-positive to the HBeAg-negative phase occurs at different rates in the various populations but also that when the 'non-replicative' HBeAg-negative phase is reached, continuation of disease activity may occur at widely different rates.

When antiviral therapy is considered for patients with CHB, it is important to obtain information on a baseline liver biopsy for three major reasons. First, it provides data on histological severity and prognosis, which leads to better education of the patient. Second, the extent of liver injury provides the clinicians with more information about the relative urgency of to reduce or discontinue the treatment in the follow up. Third, the biopsy provides useful information about the relative urgency of treatment .

The extent of disease progression (fibrosis) causes decrease synthetic function of liver, so low serum albumin level is found. Measuring serum ALT level, proportional to the degree of hepatic cell injury, can cause liver inflammation. After statistically analyzing the results it is evident that there is significant correlation between disease activity and serum ALT level and also between disease progression and serum albumin level. In the present study, no definite histological pattern was observed in each of the three categories of CHB.

Conclusion

Since there is no significant correlation among serological, biochemical and histological features of CHB, only serological and biochemical results are not sufficient for the management of this dreadful disease. Patients with negative findings of serological and biochemical values are not treated with antiviral therapy, but they may have histological activity, which was observed in this study. So, a good number of patients are deprived of proper treatment if only serological and biochemical results are considered. An informative histological report of liver biopsy is of great help in deciding the treatment policy. Serology and biochemistry cannot replace the histological importance that is obtained by apparently expensive and invasive liver biopsy procedure.

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CASE REPORT

The Osmani Medical Teachers Association Journal Volume 5 Number 1

Ulcerative colitis: A case report

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Abstract

Adv. S. Khan, a 30 years old lady, presented with frequent watery motion, mixed with blood for 3 months. It is accompained with abdominal cramps, generalised weakness, low grade fever and weight loss. Ulcerative colitis was diagnosed by colonoscopy and biopsy. In colonoscopic examination there is loss of normal vascular pattern throughout colonic mucosa and rectum. Large gut shows extensive ulceration, granulation tissues and friability of mucosa. Rectal biopsy reveals chronic proctitis.

Introduction

Inflammatory bowel disease encompasses a number of chronic relapsing inflammatory disorders involving the gastrointestinal tract.[1]

Classically inflammatory bowel disease includes two inflammatory conditions of bowel of unknown aetiology. These are ulcerative colitis and Crohn's disease.

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The incidence of ulcerative colitis is 10/1,00,000 in the west. Usually it develops after puberty and has similar incidence through out life.[3]

Ulcerative colitis typically presents with shallow, continuous inflammation, invariably involves the rectum (proctitis). It may spread proximally to involve the sigmoid colon. In minority of patient the whole colon is involved (pancolitis).

In many patients fistula, fissures, abscess and small area of involvements are absent.

Both genitic and environmental factors are implicated. A host of environmental factors including bacterial, viral, perhaps dietary antigen can triger an ongoing enteric inflammatory cascade. Approximately 5-15 percent patients have "Indeterminate colitis". It can be reliably diagnosed based on clinical and pathologic features.[5]

About 70% of the patients have a chronic intermittent illness as the relapses seperated by periods of remission. Approximately 10% of patients have a fulminating episode.[3]

The pattern of relasps tends to reproduce itself both in the extents of disease and severity. It may cause life threating inflammation of the colon and small intestine and life threat acute haemorrhage. The ulcerative colitis patients those with extensive disease more than 7 years, cumulative probability of developing cancer is 3% at 15 years, 5% at 20 years and 9% at 25 years. The

development of disease during pregnancy carries maternal mortality up to 15%.[3]

Case History:

Ms. Adv. S Khan, 30 years old, hails from Sylhet, was admitted in Shahid Shamsuddin Ahmed (Sador) Hospital on 01.11.2006. She is married but detached from her husband for 10 years. She presented with frequent watery motion mixed with blood for 3 months. It is accompanied with abdominal cramps with generalised weakness. She also complains of low grade fever with some degree of weight loss. She did not complain of ulceration of mouth or genitalia. There were no joint pain, joint swelling, ophthalmic or cutaneous involvement.

She presented with history of anal pain with per-rectal bleeding 2 years back. Colonoscopy was done, findings were normal except some anal bleeding points. Symptoms under went remission spontaneously.

On physical examination:

Patient is anxious looking, anaemic, emaciated but not toxic.

On G.I. System examination, abdomen is soft, defusely tender. Intestinal garglings are present. Per rectal digital examination and proctoscopy reveal bleeding rectal mucosa which bleeds on touch. No other gastro-intestinal abnormalities are detected.

Lab Investigation

ESR is 48 mm in 1 hour, Hb% is 7gm/dl and blood cell count normal.

C-reactive protein is positive (qualitative test).

Stool R/E shows:

Pus cell	:	plenty
Macrophages	:	present
RBC	:	present

Stool culture: No growth.

Colonoscopy

Loss of normal vascular pattern throughout entire colonic mucosa and rectum. Whole large gut shows extensive ulceration, granulation tissues and friability of mucosa. Normal colonic haustrations are remarkably absent.

Biopsy: Shows evidence of chronic proctitis.

Discussion

The major symptoms of UC are diarrhoea, rectal bleeding, passage of mucus, crampy abdominal pain, anorexia, nausea, fever and weight loss, as reported in our case.

The disease is charecterised by periods of remission and relapse often separated by months or years.[3] Proctitis causes fresh blood or blood stained mucous either mixed with stool or streaked on the surface of the stool. The case presented earlier with rectal bleeding. On colonoscopy on 09.04.05 bleeding points found in rectum. Then spontenous remission occured.

Now she has presented with bloody diarrhoea and other symptoms which indicates relapse of the disease.

Active disease can be associated with a rise in Acute-phase reactants. In this patients C-reactive protein is raised.

Colonoscopic finding significantly delineates diagnosis, extent and activity of the disease.

- Loss of the vascular appearence of the colon.
- Erythema and friability of the mucosa.
- Superficial ulceration, which may be confluent.
- Pseudopolyps.

On 10.11.06 colonoscopy was done. Findings were consistent with ulcerative colitis.

In histopathology of rectal biopsy shows rectal mucosa infiltrated with mononuclear cells. No granuloma or malignancy is seen. Stool culture is negative for bacteria.

Psycho-social factors can contribute to worsening of symptoms, such as illness, death, divorce, seperation, interpersonal conflict etc. The patient has got seperation for 10 (ten) years.

Conclusion

The case is presented for great clinical interest. Early diagnosis is utmost important. The goal is to induce remission and maintainance of remission. Multidisciplinary management of the patient is thus vital.

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CASE REPORT

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Statin Induced Rhabdomyolysis In An Elderly Female Patient Requiring Prolonged Hospitalization: Case Report, Review Of Literature And Drug Insight

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Abstract

The elderly represent notable proportion of patients who present with myocardial infarction or acute coronary syndromes. A call for more aggressive low density lipoprotein cholesterol targets that will increase the dosage of statin monotherapy or the use combination treatment may increase the risk of adverse events. Statins are well tolerated by most patients but can produce a variety of muscle-related complaints or myopathies. The most serious risk of these drugs is myositis with rhabdomyolysis. We report a case of an elderly female patient who developed rhabdomyolysis while taking high dose of simvastatin, necessitating hospitalization and intravenous hydration. A review of literature detailing the risk factors, mechanisms of statin-induced myopathy, as well as possible methods of prevention is presented. The information gleaned will help practicing physicians to better understanding statin use in elderly.

Introducton

The efficacy of statins in lowering low-density lipoprotein cholesterol levels and risk of coronary artery disease as well as their safety and tolerability is well established.[1, 3] Statins are increasingly used to lower the serum cholesterol concentration for both primary and secondary prevention of coronary artery disease. The elderly represent a high proportion of patients who present with myocardial infarction or acute coronary syndromes.

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The following report describes an elderly female patient who experienced rhabdomyolysis while taking high-dose of simvastatin. The case report presented herein and the review of literature discusses the risk of statin-induced myopathies and potential mechanisms and possible preventions of adverse effects.

Case Report

A 69-year old white female presented to our hospital for evaluation of progressively increasing generalized muscle weakness and fatigue for several days. She denied any chest pain, shortness of breath, headache, nausea, hematuria, flank pain, fever or chills. She had previous history of hypothyroidism, hypertension, hyperlipidemia, chronic obstructive pulmonary disease (COPD) and anxiety. Six weeks prior to admission she had an anterior wall myocardial infarction that required intervention involving left anterior descending artery. The medications on current admission included ecotrin 81 mg daily, plavix 75 mg daily, synthroid 88 mcg daily, advair discus 250/50 mg one puff twice a day and simvastatin (Zocor) 80 mg a day. Physical examination revealed an elderly white female patient, in no acute distress. Vital signs were stable with reduced muscle strength without focal neurological deficits. The reminder of the physical examination was unremarkable as well.

The laboratory studies done in the ER were notable for markedly elevated creatine phosphokinase (CPK) total 18,212 IU/L, myoglobin 10124,4 ng/ml, cardiac troponins were negative. Other blood sutides showed sodium 140 meq/l, potassium 3.6 meq/l, bun 11 mg/dl and creatinine 0.9 mg/dl. Her CPK one month prior to the presentation was 45 IU/L. Routine urinalysis revealed large amount of occult blood but only 0-1 RBC/hpf, WBC 0-1/hpf, trace bacteria. Liver function tests (LFT) revealed alanine aminotrasferase (ALT) 367 IU/l, aspartate aminotrasnferase (AST) 547 IU/l (two

months prior to that ALT was 17 IU/l and AST was 20 IU/l). Thyroid stimulation hormone (TSH) level was 2.49 uIU/ml. Patient was admitted to the hospital with the diagnosis of myoglobinemia with rhabdomyolysis most probably secondary to adverse effect of simvastatin (Zocor).

Simvastatin therapy was discontinued. The patient was started on high-dose intravenous fluids (0.9% normal saline with 45 mEq of sodium bicarbonate at 100 cc/hr), mannitol to alkalinize the urine to treat myoglobin-induced acute tubular necrosis. By day three her CPK total came down to 11200 IU/L and myoglobin to 4786.2 ng/ml. Her renal function as well as the rest of electrolytes remained stable throughout the hospital course. On day nine patient was discharged home in a clinically stable condition with no muscle aches or weakness and CK total being 912 IU/L.

Discussion

Definitions and incidence of muscle toxicity related to statins

The statins, inhibitors of 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase, the rate-limiting enzyme of cholesterol biosynthesis, are potent cholesterol lowering drugs. Statins are generally well tolerated by most of the patients, but can cause a variety of muscle-related complaints or myopathies.[1] The most serious side effect of these medications is myositis with rhabdomyolysis.[1] The clinical trial definitions of potential muscle adverse reactions due to statins are shown in table 1.

Rhabdomyolysis can occur at any time an individual is taking a statin. The cohort data indicate a low incidence of rhabdomyolysis for persons taking statins other than cerivastatin (withdrawn from market in August 2001 because of its association with fatal rhabdomyolysis), 3.4 per 100,000 person-years. The percentage of the reports of statin-associated rhabdomyolysis as well as the percentage of adverse events for each statin reported to the FDA MedWatch system from January 1, 1990, through March 31, 2002 showed that cerivastatin was the most commonly implicated statin (57%), followed by simvastatin (18.3%), atorvastatin (11.5%), pravastatin (7.3%), lovastatin (4.4%) and fluvastatin (1.6%).[1] Rhabdomyolysis-related deaths have been reported with all statins except for fluvastatin.[5]

Mechanism of statin-induced muscular toxicity

Although, the mechanism by which statins cause myopathy and rhabdomyolysis is not precisely known, excessive serum concentrations of statins are believed to be an increased risk for rhabdomyolysis. It is thought that skeletal muscle toxicity may be the result of inhibition of HMG-CoA reductase activity in striated muscle cells and that the potential to cause myopathy is therefore a class effect of the HMG-CoA reductase inhibitors. It can be expected that hydrophilic HMG-CoA reductase inhibitors require higher plasma concentrations than lipophilic HMG-CoA reductase inhibitors to reach intracellular concentration sufficient to damage striated muscle cells.

HMG-CoA reductase is the rate-limiting enzyme for cholesterol formation in the liver and other tissues. By inhibiting HMG-CoA reductase, statins decrease the hepatocyte cholesterol content, and stimulate expression of LDL receptors, then, ultimately enhance removal of LDL-C from the circulation. Depletion of cholesterol in myocyte cell membranes may affect the membrane solubility and predispose to myopathy.[1, ,8] In addition, X-ray crystallographic studies have determined the structures of the catalytic portions of HMG-CoA reductase in complex with statins.[9] The HMG-like moiety of statins occupies the HMG binding site of the reductase enzyme, thus sterically inhibiting the substrate from binding.[8]

The statins differ in their absorption, plasma protein binding, excretion, and solubility and exhibit variable dose-related efficacy in reducing LDL-C. LDL-C is reduced by an additional 7% with each doubling of the statin dose.[1] Sometimes statins combined with a number of other lipid modifying drugs, including bile acid-binding resins, niacin, and fibrates. Patients using combination therapy should be monitored carefully for any side effects including muscle-related symptoms if taking either niacin or fibrates. However, statins may also be combined with the novel cholesterol absorption inhibitor ezetimibe. Ezetimibe is approved for use alone or with a statin to reduce elevated total cholesterol and LDL-C. Some studies have shown an increased incidence of hepatic transaminase elevation with this combination.[8,11]

Statins reduce cholesterol, an important structural component of biological membranes, by inhibiting the formation of mevalonate, a precursor of cholesterol, produced by HMG-CoA reductase. Therefore, they may alter muscle cell membrane function. Accumulation of lipids within myocytes may be another cause of myopathy. Additionally, statin may alter membrane properties and inhibit the production of mitochondrial adenosine triphosphate.

Risk factors associated with statin-induced myopathy

A variety of factors influence the myotoxic potential of statins. These include age, sex, and body size, or increase in the concentration of statin in muscle tissue. Many of these risk factors are increasing in prevalence. For example, the likelihood of living longer, and the effect of aging on muscles, coupled with the increased possibility of comorbid conditions or use of concomitant medications, can increase the risk of myotoxic events. The prevalence of diabetes and the metabolic syndrome with concomitant complex dyslipidemias requiring aggressive therapy could increase the risk of adverse muscular effects.

It is known that the risk of myopathy increases with statin dose. Hence, any factors that increase the concentration of statin in muscle tissue may enhance the potential for myotoxic effects. The ability of a statin to penetrate into peripheral tissues is influenced by circulating levels, lipophilicity, or the presence of an active uptake mechanism. Elder patients may also be at increased risk of myotoxic effects. The majority of statins are eliminated through the bile after metabolism in the liver. For this reason, the risk of myopathy is considerably higher in patients with obstructive biliary tract disease. Drugs that inhibit the activity of CYP3A4, such as cyclosporine, may increase serum concentrations of statins metabolized via this pathway, leading to an increased risk of myopathic events.

Rhabdomyolysis occurred in a patient after an increase in the dosage of simvastatin. In the A to Z trial [3,1 ,13] an unusually high proportion of patients (0.47%) in the group assigned to 80 mg of simvastatin developed myopathy. The Muscle Expert Panel of FDA[1] affirms that statin-induced muscle complaints have been documented to increase with increasing serum concentration in humans.[1 ,15] Surprisingly, however, the Panel could not find any direct evidence relating intramuscular statin concentrations to myopathy.

Morphologic observations suggest that dividing myoblasts are sensitive to the effects of HMG-CoA reductase inhibitors and that myotoxicity may relate to the elevation intracellular calcium induced by these drugs.[1]

The incidence of rhabdomyolysis may be higher among persons taking simvastatin, lovastatin and atorvastatin because the former are metabolized by cytochrome P450 3A4 ,[1] than fluvastatin (oxidized by CYP 2A9) or pravastatin (not oxidized by P450 because it is water soluble). Marked increases in CK levels were also more frequent with Simvastatin when used in patients postmyocardial infarction at 80 mg/day versus 40 mg/day.[18]

Systemic infections can decrease the threshold of statin-induced muscle injury. [19] Increased risk of rhabdomyolysis has been described in patients taking simvastatin concurrently with nefazodone or azithromycin. While gemfibrozil and simvastatin are still frequently used concomitantly, the risk associated with this combination is well supported by the literature. [1, , 3]

Implications of statin adverse effects in elderly and diagnostic dilemma

The inception of evidence for the use of statins in secondary prevention of cardiovascular events in high-risk elderly patients is basically derived from two large randomized trials. , [5] In PROSPER [5], a randomized study which included 5,804 high-risk patients aged 70-82 years with mean age of 75 years for secondary prevention, pravastatin 40 mg caused a reduction of 24% for coronary mortality (99.5% CI, P=0.043) without effect on all-cause mortality. In The Heart Protection Study simvastatin therapy was associated with a reduction of combined endpoint of CHD death and nonfatal MI at 32.6% in patients younger than 65 years and 21.8% in those aged 65 or older.[3] Among patients aged 80-85 years, a clear reduction was noted in first major vascular event rates with statin therapy compared with placebo (23.1% versus 32.3%; P=0.0002)[3]. In general, statins are safe and well tolerated by the elderly.

Nevertheless, the impact of statin adverse events may be amplified in the elderly. The most common adverse effects are asymptomatic elevations in hepatic transaminases and myopathy. Recently published data

suggest that elderly patients experience a higher incidence of adverse outcomes following statin use than younger age-group patients.[3] Despite the relationship of higher cholesterol to greater risk of heart disease has been reported across many epidemiological trials focusing on middle-aged participants, the relationship of cholesterol to heart disease is less consistent in the elderly. [8] Some studies continue to show a relationship (often attenuated) [9,3], whereas in other studies, the relationship is lost.[31-33]

Our elderly female patient required prolonged hospitalization for treatment of rhabdomyolysis. Of utmost importance is the fact that as the age of the population increases, women increasingly predominate.[3] Women differ from middle-aged men in the epidemiological relationship of cholesterol to survival, with generally less association of cholesterol to cardiovascular disease , and less association with overall mortality.[35] Evidence however suggests that treatment of elderly patients is as cost-effective as treatment of younger age-groups.[3] Furthermore, elderly patients are more likely to have nonspecific symptoms, which could lead to inappropriate premature discontinuation of statin.[3] Caution should be applied to all patients with risk factors for development of rhabdomyolysis (Table 2) including elderly patients. The dose of statin should be modified in patients of different age.

A high-degree of clinical suspicion is of utmost importance for immediate recognition of statin-related life threatening conditions. The similarity of statin-induced symptoms and symptoms related to the decline in functional status, both of which are potentially founded on mitochondrial dysfunction[3] poses particular clinical problem for the elderly. The classic presentation of rhabdomyolysis includes myalgias and pigmentruria due to myoglobinuria in association with elevated serum muscle enzymes.[38] The excretion of tea-or cola-colored urine signals the presence of severe myoglobinuria.[1] Elevation of serum aminotrasnferases due to muscle damage is also common and may be confused with liver disease. The degree of muscle pain may vary among the patients; however it is not necessary to have muscle symptoms for the diagnosis of rhabdomyolysis. Multiple electrolyte and metabolic abnormalities may also occur such as hyperkalemia, hypocalcemia, hyperphosphatemia, hyperuricemia, metabolic acidosis, renal failure.

In general, The Muscle Expert Panel of FDA[1] recommends considering baseline CPK values for patients at increased risk for myopathy such as those with renal or hepatic dysfunction or those on medications that might affect statin metabolism. The Panel does not advocate routinely measuring or monitoring CPK levels in asymptomatic patients because marked, clinically important CPK elevations from statin alone are rare. The Muscle Expert Panel advocates CPK measurement in symptomatic patients to gauge the severity of muscle damage and to facilitate a decision about whether to continue therapy. The Panel also recommends that all symptomatic patients on statin therapy have an evaluation of thyroid function, because hypothyroidism, as in our case presented herein, can decrease statin catabolism, as well as a search for other exacerbating factors such as concomitant medications that reduce statin metabolism.[1]

Conclusions And Recommendations

The benefit of statins has been shown in clinical trials and they form cornerstone of treatment of atherosclerotic vascular disease. Although statins are considered relatively safer drug, one should not forget their known potential for myotoxicity and life-threatening side effect, like rhabdomyolysis. The elderly are prone to drug-related adverse events and, therefore caution should be applied when translating safety data obtained predominantly from younger population. The broader use also increase our responsibility to understand the potential drug interaction of this medication, and to keep a high level of alertness and caution when using statins, especially in elderly population who may be on multiple medications for the management of other conditions. There is lack of data suggesting that high-dose statins can reduce the risk of cardiovascular events more effectively than moderate doses but the risk of adverse effects might be very significant especially in the elderly population. Clinicians should be mindful of dosage while prescribing.

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CASE REPORT

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Sebaceous cyst—an unusual occurrence in the breast

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Summary

A 35 year old female was admitted in a private clinic of Habiganj with a history of slowly enlarging breast lump for 20 years with dirty discharge from punctum.Examination revealed a palpable ,painless ,cystic lump in the upper inner quadrent near the nipple of the right breast.During surgical exploration,it was diagnosed as sebaceous cyst.

Introduction

A sebaceous cyst(synonym: pilar cyst or epidermal cyst) is a closed sac occurring just under the skin which contains a "pasty" or "cheesy" looking substance. A foul odour is also often present in the substance called **keratin** which is a protein that creates the sac of cells and fills sebaceous cysts.The bumps or lumps one can feel under the skin are actually the sac of cells. Sebaceous cysts can occur anywhere in the body(except palm and sole) and in all age groups. But its occurrence, and huge size in the breast is rare.

Sebaceous cysts are often the result of blockage of the sebaceous gland or skin trauma causing swollen hair follicles. There is no known cause behind these, though, it is seen that sebaceous cysts in some individuals, is caused by four factors:

- hormones, particularly the hormone called androgen
- increased production of sebum, the oily substance within the hair follicles
- changes in the lining of the hair follicles
- bacteria and other organisms, which cause infections and inflammation when they are trapped within the hair follicles.

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Sebaceous cysts are more common in Caucasian Americans than in African Americans or people of Asian descent.Risk factors that increase an individual's risk for development or worsening of sebaceous cysts include the folio wings:

- skin care products, which can clog the hair follicles
- menstrual cycles, which make the cysts flare-ups more likely in women when their glands are more sensitive to the hormone androgen
- airborne grease, such as in the kitchen or a fast food restaurant
- rubbing and friction of the skin by tight clothing, undergarments etc.

Small lumps or bumps that occur just under the skin of the breast, vagina, genitalia, abdomen, face, neck, or elsewhere on the body are the most common symptom of sebaceous cysts. In case of breast, this lies within the skin of the breast usually adjacent to the sternum or an inframammary fold.The cyst may become inflamed or infected.

Case report

A 35 years old housewife,hailing from Habiganj attended in a private clinic with (the complaint of) a spherical,cystic,non-tender lump in the retro areolar space of right breast with whitish discharge for 20 years.There was no history of trauma,fever,weightloss,cough,anorexia or nausea. Family history and personal history were insignificant. She had three breastfed issues.

On examaination, there was a localized oval lump in the retro-areollar space of the right breast,2cm in diameter, non-tender,margin was welldefmed,smooth surface,soft,cystic in consistency. The skin was fixed at the middle of the lump otherwise it was free. There was a punctum over the lump. The right nipple was not retracted. It was not fixed to pectoralis major and serratus anterior. Transilluminatlon was negative. Axillary lymph nodes on both sides, both supraclavicular

lymph nodes were not palpable. Left breast was normal. Other systemic examinations revealed normal findings.
Thorough preoperative check up was normal. (FNAC was nonconclusive.)
Mammography of the right breast showed a large rounded mass in the retro-areolar
region.No evidence of calcification was seen in the mass.
She was posted for the excision biopsy under general anesthesia. Transverse"""'~"~^
incision encircling the point where the skin was fixed was taken. The encapsulated
lump was separated in all the sides and taken out completely. Intraoperatively it
was diagnosed as a sebaceous cyst.
The postoperative period was uneventful.
For confirmation, the excised lump was sent for histopathological examination,which
showed features of epidermal cyst.

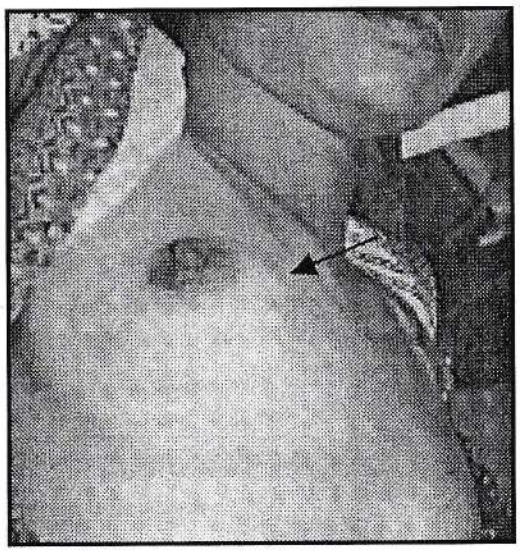

Fig: Sebaceous cyst in the right breast

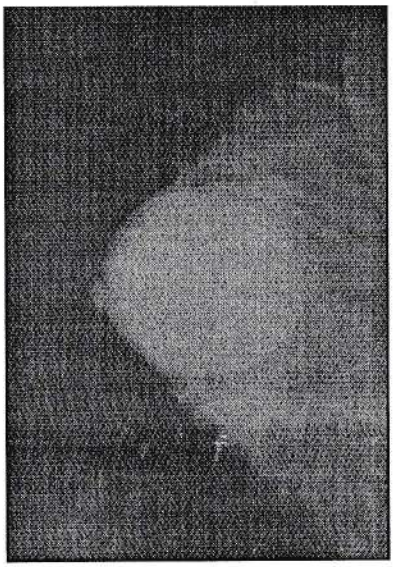

Fig: Mammographic view of the sebaceous cyst of breast

Discussion

The breast is modified sebaceous(apocrine) gland. Still the sebaceous cyst is rare in the breast._The sebaceous cysts are also called as retention cyst of a gland of Montgomery. These glands are situated near the areola and secrete sebum.The followings may present with cysts of the breast:
(1)Cystic hyperplasia of fibroadenosis.
(2)Chronic abscess.
(3) Haematoma.
(4) Galactocoele.
(5) Hydatid cyst
(6) Lymph cyst
(7) Serocystic disease of Brodie.
(8) Colloid degeneration in carcinoma.
(9) Papillary cystadenoma
(10) Sebaceous cyst.

The sebaceous glands are situated in the subareolar region .The sebaceous cyst is formed due to the retention of the sebum due to blockage of its duct. They occur in any part of the breast. But in the larger examples they lie near the nipple within the skin of the breast usually adjacent to the sternum or an inframammary fold and arise from the tubercle of Montgomery. The classic punctum is often visible. Hormone stimulation or injury may cause them to enlarge.

Sebaceous cysts are usually easily diagnosed by their appearance to the trained eye. But there are case reports of sebaceous cysts of breast of women of menopausal age, short history, huge size and skin fixation which may only point to malignancy. In some cases, a biopsy may be necessary to rule out other conditions with a similar appearance. Occasionally inflammations or infections may occur and cysts become infected and form into painful abscesses spontaneously or usually following touching or trying to remove the substance inside .Signs or symptoms that may indicate infection of sebaceous cysts include:

- redness
- tenderness
- increased temperature of the skin over the bumps or lumps
- greyish white, cheesy, foul smelling material draining from the bump or lump

Although sebaceous cysts are not dangerous, it should be examined to ensure that skin cancer is not present. Sebaceous cysts most often disappear on their own and are not dangerous. This lesion may be left or if the patient requests, excised. Sometimes sebaceous cysts grow large that they may interfere with one's everyday life. When this happens, surgical removal may be necessary. Small inflamed cysts can often be treated by injection of steroid medications or with antibiotics. It is important when sebaceous cysts are surgically removed that the entire sac is excised to help prevent a recurrence. However, it is important to note that sebaceous cyst recurrence is not unusual.

Conclusion

1 .One must keep in mind the possibility of sebaceous cyst in the breast. 2.It had may attend large size without any complication.

3.Whenever there is doubt in the diagnosis, it is better to start with the conservative operation than radical one.

4.allow the patients with long standing,non-aggressive, asymptomatic, clinically benign breast lumps to be reassured that surgery can be safely avoided.Many patients,however,prefer to be reassured by the removal of their lump and insist on an operation.In these circumstances,it is important to realize that normal tissue immediately adjacent to the healed biopsy site may later take on the characteristics of a new lump and add to the patient's anxiety.

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REVIEW ARTICLE

The Osmani Medical Teachers Association Journal Volume 5 Number 1

Handling of HIV positive patient in Operation Theatre

MD.SHAMIMUR RAHMAN[1], AND MD.SHAH NEWAZ CHOWDHURY[2]

Introduction:

Patients with human immunedeficiency virus (HIV) may be completly well and unaware they carry the virus. The other end of the spectrum is full blown acqured immunedefeciency syndrome (AIDS) with immunecomprise and encephalopathy. The virus is delicate, easily destroyed and has low infectivity.[1]

HIV Retroviridene lentiviridai,enveloped by RNA virus which is very fragile one of the mode of transmission via needle puncture when handling HIV infected patient in operation theatre.Thaugh incidence is small but definite risk of becoming infected with HIV. Large multi-institutional studies have indicated that the risk of HIV transmission following skin pucture from a needle or a sharp object that was contaminated with blood from a person with docomented HIV infection is 0.3% .After mucous membrane exposure it is 0.09%. Transmission of HIV through intact skin has not been documented .An increased risk for HIV infected following percutenious exposure involving a relatively large quantity of blood, as in the case of a divice visibly contaminated with the patient's blood, a procedure that involves a needle placed directly in a vein,artery or deep injury. In addition the risk increases for exposure of blood from patient with advanced stage disease, probably owing to the higher titer of HIV in the blood as well as to the other factors, such as the presence of more virulant stains of virus.

Universal Precaution

It is first formulated in 1987 and reformed as Standerd Precaution 1996. A simple set of procedure to be used in the care of all patients at all times in order to minimizes the spread of blood borne pathogenes.

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Universal precautions

Hand washing - with soap and water.Use protective barriers - gloves, disposable plastic gowns& aprons, masks, eye-shields, impermeable shoes.[1]

Safe handling of sharps-needles should not be resheathed, bent, broken or manipulated by hand. Providsion of resuscitation equipment that prevents the need of mouth-mouth contact. All soiled material to be considered possibly infective. Immunization of HCW with HB Vaccine. HCW who have exudative lesions or dermatitis should refrain from direct handling of patients. Adherence to correct hospital sterilization & disinfection protocols.

Universal precautions body fluids

Blood , Body fluids containing visible blood, Tissues, Semen & vaginal secretions, **Fluids**- CSF, pleural, peritoneal, pericardial, synovial and amniotic fluid

Universal precautions, do not apply to: Faeces, Sweat, Saliva, Nasal secretions, Sputum, Tears, Urine, Vomitus. Unless they contain visible blood.

Preparation of OT & Special instructions for OT staff.

All to follow universal work precautions. Anaesthesia machine & work surface should have only essential equipments.[5] Use disposables as far as possible. All cuts & abrasions on pt & staff to be covered in washproof dressings. All sharps to be handed on a tray. Swabs counted on a polythene on the floor. Suction bottles should be half filled with 2% glutraldehyde. All sharps to be disposed in puncture resistant container. All specimens to be sealed in plastic jars& labelled with a red hazard sticker. Ensure pt skin free of blood post op. Pt should wear clean gown before transfer from theatre. To be kept last in the OT list. In event of death , body to be wrapped in impermeable plastic sheet or cadaver

bag. Dispose of all needle directly into a sharp box.Never resheath needle.

Sterilization procedures

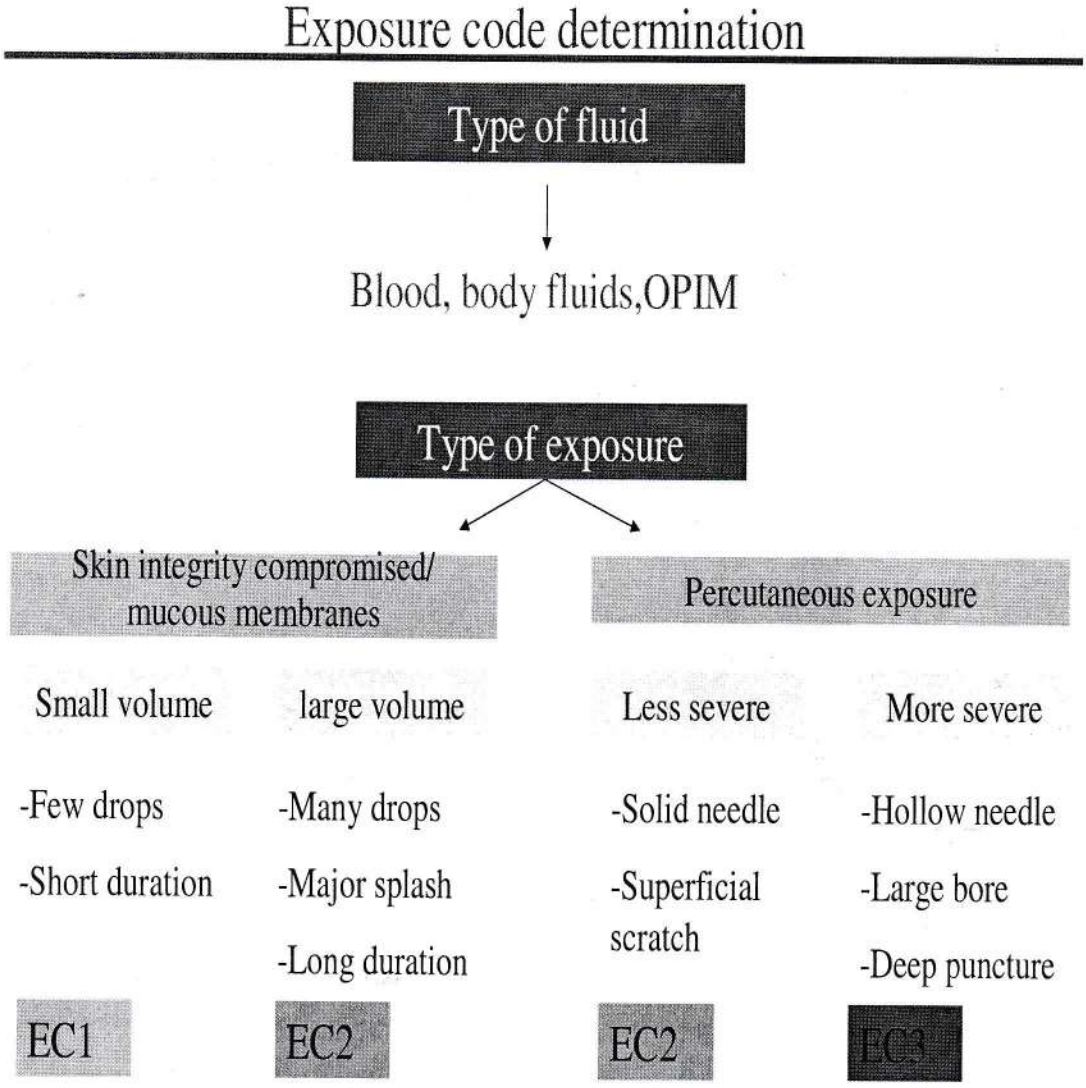
Physical methods : Autoclaving at 121 degrees C 30 mins, Boiling for 20-30 mins, ETO gas sterilization, Dry heat 170 degrees C for 60 mins, Sterilization procedures Chemical disinfection, Na hypochlorite-1%, Ethanol-70%, Formaline-3-4%, Glutraldehyde-2%, Povidone iodine-2.5%, Hydrogen peroxide-6%, Sterilization & disposal of waste, Walls & floors should be cleaned with soap & water. All consumables sent for incineration. All tissues & body waste packed & sent for incineration. Reusable instruments -2% glut for 30 mins. then washed & autoclaved. Liquid wastes should be disinfected with 1% Na hypo & flushed into sewer.[3]

Post-exposure prophylaxis following needle stick injury :

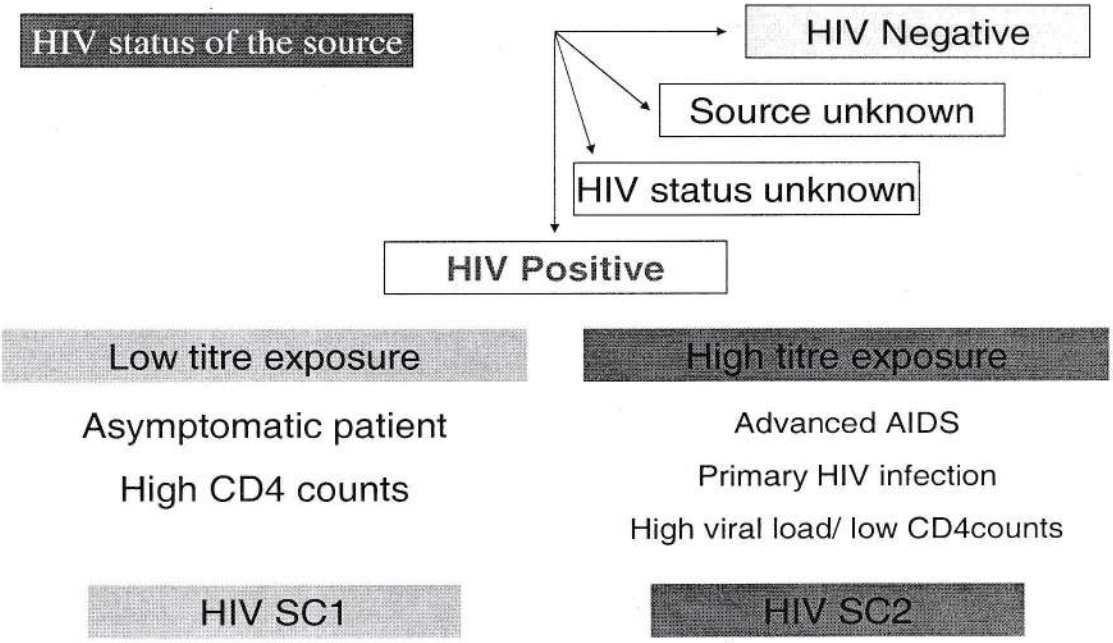
Risk of HIV infection following needle stick injury- 0.3 %,

Immediate steps to be taken-
Do not panic, Do not put pricked finger in mouth, Allow to bleed, Wash with soap & water.
Next step :
Prompt reporting, Assess EC &SC, PEP to begin as soon as possible, Preferably within 2 hrs, Not recommended after 72 hrs.

(EC- Exposure code, PEP- Postexposure prophylaxis, SC -Secure code)



HIV exposure source code



Post exposure prophylaxis(PEP)

Exposure code (EC)	HIV status code (HIV SC)	PEP recommendations
1	1	PEP may not be required
1	2	Consider basic regimen
2	1	Recommend basic regimen
2	2	Recommend expanded regimen
3	1/2	Recommend expanded regimen
	Unknown	If EC 2/3 consider basic

Post exposure prophylaxis(PEP)[6]

- **Basic regimen**

—Zidovudine 300mg,bid plus

—Lamivudine 150mg,bid x 4weeks

- **Expanded regime**:

—Basic +Indinavir 800mg,tds for 4 weeks

Testing & Counselling[6] :

Testing for HIV

—At time of exposure.

—6 wk following exposure.

—12 wk following exposure.

Counselling[7]

—Pre test & post test on all occasions

—Refrain from blood/organ donation.

—Refrain from unprotected sex.

Conclusion

Most patients with transmissable blood borne viruses are asymptometic and may not know that they are carrying the infection. The sensible solution is to regard all contact with patients as carrying a degree of risk and adapt universal precaution , perticularly every effort must be made to avoid needlestick .All medical staff should be immunized against hepatitis B.

Operation theatre should have infection control policies and procedure in place for cleaning and sterilazation equipment and the theatre environment.[1]

In Bangladesh lot of undiaognosed cases of HIV patient specially Middleeast peaple so handling of that patient be careful and precaution must be taken. All OT stuff must gether sufficient knowledge on HIV .

For councelling withen the hospital zone an HIV centre must needed..

Appropriete use of barrier method such as double gloving, masks, eye goggles/visor,water resistant shoewear. It is menditory to decontaminated of theatre after procedure.

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Epidural Steroids

PARTHA SARATHI SHOME

In both the U.S and England epidural steroid injection (ESI) in the treatment of back pain is practiced extensively and by a variety of clinicians including general practitioners. Surgeons, Anesthesiologists and trained physiotherapists . The epidural Steroid injections has been employed as an adjunctive treatment for sciatica for more than half of the century[1 3] ESIs of a combination of a long -acting steroid with an epidural anesthetic is an excellent method of symptomatic treatment of back and leg pain from discogenic disease and other sources. Epidural steroid injections (ESIs) were endorsed by the North American spine Society and the Agency for health care policy and research as an integral part of non- surgical management of radicular pain from lumbar spine disorders.The first epidural injection using the caudal approach was performed in 1901 when cocaine was injected to treat lumbago sciatica

. Reports of the epidurals form the 1920s - 1940s involved using high volumes of normal saline and local anesthetics. Injection of corticosteroids into the epidural space for the management of lumbar radicular pain was first recorded in 1952. ESIs are performed best in combination with a well designed spinal rehabilitation program. Clinical practice and research suggest that lumbar radicular pain is the result of inflammation of the nerve root in the epidural space provokedby either leakage of disc material, compression of the nerve root vasculature, or irritation of dorsal root ganglion from spinal stenosis. Steroids have been shown to reduce inflammation by inhibiting the production of substances that cause inflammation, ESI can be highly effective because it delivers the medication directly to the site of inflammation . Flushing solution (either lidocaine or normal saline) is also used to help "flush out" inflammatory proteins from around the area that may be the source of pain.[5] Continuous bed rest & traction for 02 weeks reduce the disc herniation in over 90% of cases. If the symptom and sign have not improved significantly by then, an epidural injection of corticosteroid and local may help. Riew et al reported results from a prospective, randomized, double- blinded and controlled clinical trial on 55 patients with severe sciatica from either spinal stenosis or lubmar disc hemiations. These patients had not responded to 6 weeks of conservative treatment and were considered surgical candidates. The patients were divided into 2 groups; one group received lumbar epidural injection with bupivacaine and the other group received bupivacaine only. The follow up period was 2 -3 years. The results demonstrated that only 23% of patients in the group that received lumbar epidural steroid injections needed an operation, while 67% of the patients in the bupivacaine injection group underwent surgery. The difference was statistically significant. They found that the injection was effective in obviating the need for an operation in more than half of the patient in whom surgery had been proposed. Early ESIs also carry theoretical benefit of controlling inflammation at the early stage, and preventing permanent damage such as nerve fibrosis from the prolonged inflammatory process

. Early use of ESLs may have a better beneficial effect than later/delayed use.(3-5 ml.)may be used for ESIs using the interlaminar approach & (1.5 - 2 ml.) for transforaminal ESIs[8] Epidural steroid injection is a low-risk alternative to surgical intervention in the treatment of lumbar disc hemiation. ESI is a simple cost effective and minimally invasive treatment, the site, route and volume of medication given should be direct specific and appropriate. The complications are negligible and temporary. It is highly useful in patients who desire quick relief or whose circumstances dictate so (crisis intervention)[9]

In several reports, long term success rate for transforaminal epidural glucocorticoid injection ranged from 71% to 84%. Patient with disc herniations and radiculopathy attained maximal improvement in 6 weeks.[1] 50% - 75% patients with radicular pain received temporary relief after ESIs , only 25% to 57% received excellent long-term relief. Interestingly , transforaminal injections seem to have predictive value in deciding whether a patient might benefit from surgery. 95% patients who get no relief from injections also do not benefit from surgery for chronic radiculopathy ,[u] Transforaminal epidural steroid injection is a relatively

simple, effective and low-risk alternative to surgical decompression for the treatment of lumbar disc herniation is selected cases. Transforaminal injections may produce longer pain relief and may also predict whether a patient might benefit from surgery or not. The procedure significantly alleviates the severity of sciatica due to a herniated disc and improves the patient's daily activity; this reduces the need for surgical decompression.[1]

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পপুলার জেনারেল হাসপাতাল

আজাদী-৬৫, মিরবক্সটুলা, (নয়াসড়ক), সিলেট, ফোন ঃ ৭২৩৩৬২, ৭২২৫১০

ডাক্তার মালিকদের সার্বক্ষনিক উপস্থিতি ও ব্যক্তিগত তত্বাবধান, প্রায় সরকারী হাসপাতালের খরচে অত্যাধুনিক প্রাইভেট ক্লিনিকের চিকিৎসা সেবা, ২৪ ঘন্টা এ্যাম্বুলেন্স, প্যাথলজি, ই,সি,জি ও বিশেষজ্ঞ চিকিৎসকের নিশ্চয়তা, প্রশস্ত পার্কিং সহ শহরের কেন্দ্রস্থলে অত্যন্ত সুন্দর জায়গায় সুদর্শন ও আরামদায়ক আধুনিক ভবনে এর অবস্থান ইত্যাদি হচ্ছে এই হাসপাতালের বিশেষ বৈশিষ্ট।

মেশিন দ্বারা ব্যথামুক্ত অবস্থায় কান ও নাকের দাগা এবং নামে মাত্র খরচে অভিজ্ঞ সার্জন দ্বারা মুসলমানির ব্যবস্থা আছে।

দি সিলেট এক্স-রে এণ্ড ডায়াগনষ্টিক সেন্টার

SYLHET XDC

১০নং মধুশহীদ, চৌধুরী ভিলা (নীচ তলা), সিলেট।
সময় সূচী ঃ প্রতিদিন সকাল ৮টা থেকে রাত ১০টা
ফোন ঃ ৭১৩২৩৯, মোবাইল ঃ ০১৭১১১৬৪৯১২

আমাদের সুবিধাসমূহ

* কম্পিউটারাইজড প্যাথলজি * এক্সরে * ই সি জি * ইকোকার্ডিওগ্রাফী
* আলট্রাসনোগ্রাফী * সাইটোলজি * পেপস মেয়অর * এফ, এন,এ,সি
* সকল প্রকার আল্ট্রাসনোগ্রাফী গাইড এফ,এন,এ,সি
* হিসটোপ্যাথলজি সহ সকল ধরণের পরীক্ষা কম সময়ে দক্ষ প্যাথলজিষ্ট দ্বারা সঠিক রিপোর্ট প্রদান করা হয়।