Incision, Curettage And Primary Suture Versus Incision And Open Drainage Of Acute Abscesses

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Introduction:-

Acute pyogenic abscesses are common in India due to low socio-economic status and poor personal hygiene. A considerable number of these cases are met with in surgical outpatient department daily. Diagnosis is not very difficult. Treatment of abscess has been quite popular since ancient times. During those days the barbers used to incise the abscess in a crude manner without the knowledge of anatomy and other subjects. In the recent years there has been a great increase in scientific knowledge including surgical technique, pre- and postoperative managements, advance knowledge of anatomy and surgical principles which has resulted in change being introduced rapidly in the practice of surgery. Different methods were advocated by different authors in search of a better procedure and the results were published.

Material And Method

This work comprises a study of 200 cases of acute abscesses attending the surgical outpatient department of Bhagalpur Medical College Hospital during one year and 4 months period between January 1983 to April 1984. The cases which had burst spontaneously were not included in this series. The site, size and duration of each infection were noted. Bacteriolo-

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gical specimen was collected in each case for culture. The patients were divided into two treatment groups :-

Group A :- Incision, curettage and primary suture under antibiotic cover :- Penicillin was given by intramuscular route 2 hours before operation. Oral Erythromycin was started on the day of surgery and it was continued for 1 week, under general anaesthesia after taking all anti-septic and aseptic measures, the abscesses were incised, pus evacuated and the walls of the cavities were destroyed by curettage. Deep mattress sutures of cotton thread were given to close the cavity and a firm dressing was applied. Sutures were removed on 9th post operative day.

Group B :- Incision and open drainage under antibiotic cover :- After taking all precautions as in group A, the abscesses were incised and drained. They were packed with packing gauze soaked in electrolytic chlorine and dressing was done. Antibiotics were administered in similar manner as in group A. These cases were reviewed at 48 hours interval when the packs were removed. Dressing was continued till discharge ceased and granulation tissue was seen, then dry dressing was done till the wound healed.

Observations

Age :- Age varied from 2 months to 80 yrs, Maximum incidence was found in 11-20 years age group, (Table - I)

Sex :- Out of 200 cases: 134 cases were males and 66 females the ratio being approximately 2:1 (Table - I)

Distribution :- Table II shows the distribution of abscesses at different sites.

Bacteriology :- The incidence of various infecting organisms is shown in table III. The majority of the cases were found to be due to staphylococcus. **Healing time :-** Table IV shows the healing time. Since the mean healing time in these groups differed only by 0.5 days, hence no difference in healing time may be said.

Recurrence :- The patients were followed up for 2 to 3 months. A recurrence rate of 15% was seen in group A. No recurrence was found in group B.

Discussion

The standard method of treatment of an acute abscess is incision and drainage of abscess cavity. The method of incision, curettage and primary suture for acute abscess had been instituted first by Ellis in 1951, Since then different authors have published the efficacy of this method in abscesses at different sites (Lowden, 1955; Wilson, 1964; Page 1974; Jones and Wilson,

1976), Nagpal and Sekhon (1979) have strongly recommended the primary suture technique as the treatment of choice in acute abscesses.

The healing time of 6.6 days in closed technique was reported by Page (1974). Macfie and Harvey (1977) recorded a mean healing time of 9.3 days in primary suture method and 9.8 days in traditional open drainage method under antibiotic cover. Average time of 12 days for healing was reported by Muzumdar and Rao (1974). In this series under antibiotic therapy, a mean healing time of 12.9 days was obtained by closure method and 13.4 days was found by conventional method of incision and drainage. Wilson (1964) treated 120 cases by incision, curettage and suture method and he reported a recurrence rate of 22 %. In this series 100 cases were treated by this method and a recurrence rate of 15 % was seen. This high recurrence rate may be due to faulty surgical technique as the abscess wall might have not been broken properly to let the antibiotic reach the infected tissue. The dead space of the abscess cavity filled with blood clot and the suture material may also be responsible for high recurrence rate in this study.

The purpose of this study is to compare the conventional method of free drainage with primary suture technique for the treatment of acute abscess under antibiotic cover. The results of this series show that the healing time in closure method is slightly less than that of the conventional open drainage method. In suture technique, a high recurrence rate (15%) was seen which is zero in traditional method of free drainage. This high recurrence rate increases the work load on hospital staffs and causes inconvenience to the patient too. High recurrence rate in suture technique may be further reduced by breaking the abscess wall properly and using suture material like monofilament nylon etc. Frequent hospital visits, pain and cost of repeated dressing of open drainage method may be avoided by suture technique.

Summary

Two hundred cases of acute abscess were studied. Maximum incidence was found in second decade. Males show preponderance to females, the ratio being 2:1. Staphylococcus was found to be the main causative microbe. Of the 200 cases, 100 cases were treated by incision, curettage and primary suture method and next 100 cases were treated by traditional method of incision and open drainage. The results of these two methods were compared. Incision and drainage technique is still supposed to be the safest and surest method. Further works are required for firm conclusion regarding suture technique.

Table I

Age and Sex Incidence

Age of Patients in years	Male	Female	Total number of patients	Percentage
1-10 Years	28	12	40	20%
11-20 Years	47	18	65	32.5%
21-30 Years	32	16	48	24%
31-40 Years	10	6	16	8%
41-50 Years	7	5	12	6%
51-60 Years	5	4	9	4.5%
61-70 Years	3	5	8	4%
71-80 Years	2	0	2	1%
Total	134	66	200	100%

Table II

Site wise distribution

Site	Number of cases
Scalp and face	45
Upper extremity	34
Cervical	20
Chest wall	9
Back	8
Parietal (abdominal Wall)	7
Scrotum	4
Breast	7
Axilla	16
Lower extremity	29
Gluteal	14
Total	200

Table III

Causative Organisms

Organisms	Group A	Group B
Staphylococcus		
Coagulase +ve	48	49
Staphylococcus		
Coagulase -ve	5	4
E. Coli	4	3
Pseudomonas	4	6
Klebsiella	5	3
Streptococcus	7	4
Proteus	3	4
No growth	23	28
Total	99	101

Table IV

Healing Time

Treatment groups	Number of cases	Mean healing time in days
A	100	12.9
B	100	13.4

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