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Interval tonsillectomy: 27 cases of peritonsillar abscesses managed in medical college hospital.

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Keyword 1: peritonsillar abscess.
Keyword 2: Interval tonsillectomy.
Keyword 3: quinsy tonsillectomy.
Keyword 4: incision and drainage.

Abstract:

Background/objectives: *Peritonsillar abscess (quinsy) is the most common deep infection of the head and neck. The surgical treatment whether abscess tonsillectomy or interval tonsillectomy should be done is a subject of controversy which still remains unresolved.*

Setting: *Department of ENT, Head and Neck Surgery, KVG Medical College, Sullia.*

Materials and methods: *This is a comparative case series analysis study done in our department during the study period of 54 months from Jan 2007 to June 2011. 27 patients with clinical features of peritonsillar abscess who underwent medical line of treatment with incision and drainage and later interval tonsillectomy were included in the study.*

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Results: *The mean age was 30.4 years, mean hospital stay during incision and drainage was 3.51 days. The patient turned up for surgery within a mean duration of 9.4 months. The mean blood loss during the procedure was 100.5 ml and the mean VAS scores after interval tonsillectomy were 4.78. Mild to moderate difficulty were seen during the dissection of the abscess scarred tonsillar bed.*

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Conclusion: *Interval tonsillectomy is the standard treatment for managing peritonsillar abscess in many institutions. We recommend interval method of tonsillectomy done after a minimum of 6 weeks after incision and drainage of the peritonsillar abscess.*

Introduction:

Peritonsillar abscess (quinsy) is the most common deep infection of the head and neck.[1] It is seen commonly in young adults but now it is also seen frequently in older individuals.[2,3] Incidence is higher in the age group 20 to 40 years adults.[2,3] Children in the younger pediatric age group are seldom affected unless immuno-

compromised but if occurs causes significant airway obstruction and morbidity.[2,3] Males and females are equally affected.[2,3] The incidences increase during the months of November to December and April to May because of highest incidence of streptococcal pharyngitis and exudative tonsillitis.[4,5] This infection begins as a superficial tonsillar infection and progresses into tonsillar cellulitis forming an abscess at the most advanced stage.[1]

Abscess is always a polymicrobial infection, but Group A streptococcus is the predominate organism.[1] Usually a combination of aerobic and anaerobic organisms are seen on culture.[2] Early diagnosis and initiation of therapy is important to avoid potential serious complications.[6] Symptoms include progressively worsening sore throat with severe odynophagia, with difficulty to swallow his own saliva. Odynophagia is often localized to one side with constitutional symptoms of fever, malaise, dysphagia and otalgia.[1]

Clinically the tonsils look swollen, erythematous, edematous pillars with purulent exudates on the tonsils and contralateral uvular deviation.[1] Trismus and a hot potato muffled voice with cervical lymphadenopathy are seen.[1] Ultrasonography and computed tomographic scanning are useful in confirming a diagnosis.[1] Needle aspiration remains the gold standard for diagnosis and treatment of peritonsillar abscess.[1] The management includes immediate abscess drainage and administering broad spectrum antibiotic therapy for aerobes and anaerobes. Also electrolyte imbalance should be corrected and analgesics for pain.[1] Group A streptococcus and oral anaerobes sensitive antibiotics should be

the first line of therapy.[7] Steroids may be helpful in reducing symptoms and speeding recovery.[8]

Here in our study a series of 27 patients who underwent interval tonsillectomy 6 weeks after incision and drainage for peritonsillar abscess were retrospectively studied.

Materials and methods:

This is a comparative case series analysis study done in our department during the study period of 54 months from Jan 2007 to June 2011. 27 patients with clinical features of peritonsillar abscess who underwent medical line of treatment with incision and drainage were included in the study. All the 27 patients underwent interval tonsillectomy 6 weeks after incision and drainage. The age group ranged from 13 to 58 years and the youngest patient was a 13 year old male student (fig 1-2) and the oldest 58 year old male farmer.(fig 3-4) Tonsillectomies done for other indications were excluded from the study. Peritonsillar abscesses drained and who did not turn up for surgery were excluded.

All the abscesses drained were sent for culture and sensitivity. All the 27 cases were drained in the OPD with 15 % lidocaine spray and St Clair Thompson peritonsillar abscess draining forceps. The abscess was redrained next two days till the abscess dried off. The patients who were having absolute dysphagia unable to swallow their own saliva had immediate symptomatic relief after the procedure. All the patients were discharged after the pain and swelling subsided. They were

advised to undergo interval tonsillectomy after 6 weeks. The patients underwent tonsillectomies after a month in our institution with scalpel cautery method.

Results:

Our study consisted of 9 females and 18 males with a mean age of 30.4 years. 8 patients had right sided abscess and 19 had left sided. No bilateral case was seen in our study. The average stay in the hospital during incision and drainage was 3.51 days. The average time after incision and drainage the patients turned up for interval tonsillectomy was 9.4 months. All the patients were operated under general anesthesia with endotracheal intubation. The degree of difficulty while dissecting the abscess scarred tonsil was graded as Grade 0-no difficulty, Grade 1-mild difficulty, Grade 2- moderate difficulty, Grade 3- severe difficulty. The average difficulty scores was 1.51 with score of 3 seen in only 3 patients. The average blood loss during the surgery was 100.5 ml. The pain scores were measured at 8, 16, 24 and 48 hours using 10 cm VAS scale and an average score of 4.78 was found. (table 1)The blood loss and VAS score scale are as less as seen in tonsillectomies for chronic tonsillectomy cases and so we recommend interval tonsillectomy after 6 weeks after incision and drainage for peritonsillar abscess.

Discussion:

Peritonsillar abscess and peritonsillitis are two of the commonest ENT emergencies.[9] They are collections of purulent material that develop outside the tonsillar capsule near the superior pole.[9] They may develop as the most frequent complications of acute tonsillitis, when the infection spreads from the crypts to the

loose areolar peritonsillar tissues.[9] They are mainly situated in the upper pole and involve the soft palate pushing the tonsils forwards and towards the midline.[9] The condition is usually unilateral and mostly affects young adults.[10] Edinger et al in their study noted a male dominance up to 2:1 and higher number of young adults.[10] Papacharalampous et al reported 1.6:1 times higher incidence in males in their 10 year series study and higher incidence in 20-40 year age group. [11]

It is believed to be a part of a clinical modality that progresses from acute tonsillitis to peritonsillar cellulitis and finally to peritonsillar abscess.[12] Early diagnosis, with drainage of the abscess, is crucial to prevent perforation into the parapharyngeal/retropharyngeal space and further spread along the neck vessels to the mediastinum and skull base.[12] The abscess may be aspirated causing severe upper airway obstruction, epiglottic or laryngeal edema if the treatment is delayed.[12] Although unilateral peritonsillar abscess is a common complication of acute bacterial tonsillitis, bilateral peritonsillar abscesses are quite rare.[13] In most bilateral cases, an unsuspected contralateral abscess is discovered during tonsillectomy.[13]

The basic management strategy consists of systemic antibiotics covering group A β-hemolytic streptococci which is reported to be the most common offending organism and subsequent drainage of the pus.[14] Abscess draining can be done by wide bore needle aspiration, or incision drainage or immediate tonsillectomy which is called abscess , hot or quinsy tonsillectomy.[15] The surgical treatment whether abscess or interval tonsillectomy should be done is a subject of controversy which still remains unresolved.[15]

Immediate tonsillectomy is an easy to perform one-stage surgical procedure assuring quick relief of trismus and pain and total evacuation of the pus.[16] On the contrary, incision and drainage which is also supported by many authors is an awkward procedure, very unpleasant for the patient that could often lead to incomplete evacuation of the abscess cavity.[16] That is the reason why the procedure is often necessary to be repeated several times.[16] Besides, if an interval tonsillectomy is planned, such an operation could be technically more difficult because of the fibrosis of the tonsillar bed usually developed such an operation could be technically more difficult because of the fibrosis of the tonsillar bed is usually developed.[16]

On the other hand, initial conservative (nonsurgical treatment) is still supported by some authors in selected cases, before taking the risk of surgical drainage.[17] This strategy is reported to be involved especially in cases of inferior pole peritonsillar abscess, provided that the patient is immunocompetent and has no significant systemic diseases.[18] Kristensen and Tveteras in a retrospective study reported no significant difference in post-operative hemorrhages in quinsy tonsillectomy as well as interval tonsillectomy groups.[19] Bonding et al, found no significant difference in the rates of post-operative hemorrhage between quinsy tonsillectomy and routine tonsillectomy.[20,21] Risks of general anaesthesia are more in quinsy tonsillectomy as difficult intubation or aspiration due to abscess rupture may be seen during the procedure.[22]

The overall incidence of quinsy in the adult population varies in different studies and a recurrence of peritonsillar abscess varies from 5-23 % depending on the

follow up period.[22] Herbild and Bonding reported a recurrence rate of 22% in 131 patients over a 5-year period.[23] Savolainen et al reported a 17% recurrence rate in a prospective study of 98 patients over a 5-year period while Raut et al reported a 8.5% recurrence rate.[24]

Conclusion:

Interval tonsillectomy is the standard treatment for managing peritonsillar abscess in many institutions. As quinsy tonsillectomy has no advantages over interval method, less risky interval method is recommended. Quinsy tonsillectomy has disadvantages of aspiration and difficulty during anesthesia. We recommend interval method of tonsillectomy with surgery done after a minimum of 6 weeks after incision and drainage.

Sl no	Sex	age	laterality	Duration of stay after I & D (days)	Interval tonsillectomy done after I & D (weeks)	Blood loss at interval tonsillectomy (ml)	Difficulty in dissection	Average VAS score for 48 hours post op
1	M	13	L	4	6	110	1	5.3
2	M	23	L	3	5	60	1	4.6
3	M	29	L	5	8	55	2	4
4	F	32	L	3	12	100	1	4.6
5	F	36	L	4	11	150	2	5.3
6	M	58	L	2	12	180	3	6
7	M	54	R	4	5	60	2	5.3
8	M	43	R	5	6	60	2	5.3
9	M	45	L	3	12	80	3	6
10	F	32	L	2	10	80	1	4.6
11	F	25	L	3	12	60	1	5.3
12	M	18	R	4	14	70	1	4
13	M	19	R	5	12	80	1	4.6
14	F	37	L	2	10	70	1	4.6
15	M	18	L	2	9	70	2	5.3
16	M	20	R	3	9	80	1	4
17	M	23	L	3	8	100	2	4
18	F	22	L	4	8	110	2	5.3
19	M	24	R	4	12	150	2	5.3
20	F	22	L	5	12	110	1	4
21	M	18	L	5	11	110	1	4.6
22	M	22	R	3	6	120	1	4
23	F	23	L	3	8	90	1	4
24	M	23	L	4	8	90	3	6
25	M	52	R	3	9	100	1	4.6
26	M	44	L	3	8	180	1	4
27	F	46	L	4	11	190	1	4.6
mean		30.40		3.51	9.40	100.55	1.51	4.78

Table 1: description of the patients treatment records.

Fig 1 Left sided peritonsillar abscess in a young boy being drained.

Fig 2 Left sided peritonsillar abscess in a old man being drained.

Fig 3 Patient having relief after drainage

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