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Peritonsillar abscess

I. Cases treated by incision and drainage:

A follow-up investigation

By V. MOESGAARD NIELSEN and O. GREISEN (Aalborg, Denmark)

THE usual treatment of peritonsillar abscess is either immediate tonsillectomy (tonsillectomy à chaud) or incision and drainage, possibly followed by tonsillectomy 4–6 weeks later.

When treatment is by incision and drainage, primary tonsillectomy is avoided, but the risk of recurrent symptoms from the tonsils remains, especially of another peritonsillar abscess. It is often stated that further tonsillar symptoms will follow a peritonsillar abscess which is treated only by incision, but Templer *et al.* (1977) and others emphasize that the recurrence rate is not well known.

The purpose of the present investigation was to evaluate the re-occurrence of tonsillar symptoms in patients with peritonsillar abscess treated only with incision and drainage (having had no previous peritonsillar abscess or recurrent tonsillitis).

Material and Methods

During the two-year period, 1975–1977, 76 patients were treated for peritonsillar abscess. Fifty-five per cent of these patients were males; 67 per cent were under 30 years, their ages ranging from 21 months to 67 years.

Forty-five of the patients had had no previous abscess or recurrent tonsillitis, defined as more than 1–2 episodes of tonsillitis a year. Table I shows the age distribution of these patients. They were all treated by incision and drainage and all were given antibiotics. In none of the cases was tonsillectomy planned at the time of discharge from hospital.

The occurrence of another peritonsillar abscess or episodes of recurrent tonsillitis and the frequency of tonsillectomy among these 45 patients were recorded 2–4 years later (average 3 years). Information was obtained by questionnaire or interview and examination of the throat. Of these patients, 11 attended for interview and examination; 33 answered the questionnaire; the follow-up rate being 98 per cent.

Results

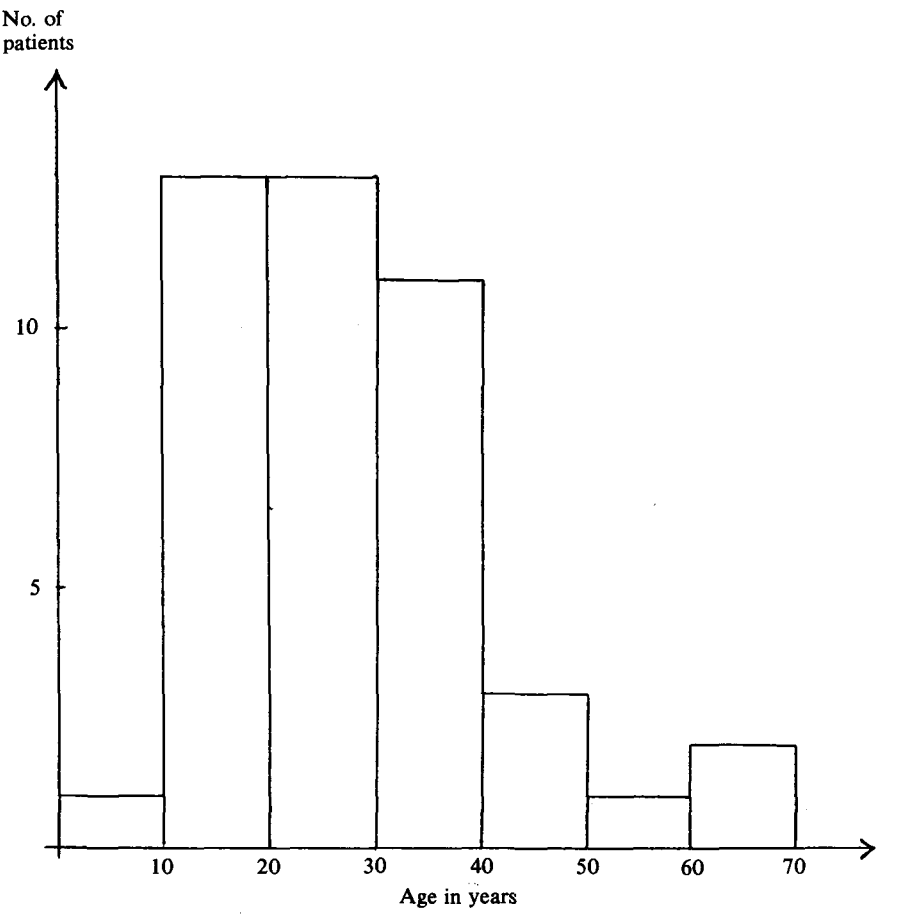
The follow-up included 44 patients treated by incision and drainage for peritonsillar abscess. In none of the cases had the patient had a

From the Department of Otolaryngology, Aalborg, DK Denmark.

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TABLE I

AGE DISTRIBUTION OF 44 PATIENTS WITH PERITONSILLAR ABSCESS TREATED WITH INCISION



previous peritonsillar abscess or recurrent tonsillitis, and in none of the cases was interval tonsillectomy planned.

Eleven patients were subjected to tonsillectomy in the follow-up period; in 8 cases for another peritonsillar abscess, and in 3 cases for recurrent tonsillitis. Among the tonsillectomized patients, the oldest was 28-years old.

Among the 33 patients who did not undergo tonsillectomy in the follow-up period, 8 had had another peritonsillar abscess or recurrent tonsillitis, while 25 patients had had no tonsillar symptoms.

Relating tonsillar symptoms to the ages of the patients, the follow-up showed that recurrent symptoms were predominant among patients under 30 years of age (17 out of 19 cases), while only 2 out of 17 patients over 30 years old had had another peritonsillar abscess or recurrent tonsillitis

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TABLE II

OCCURRENCE OF ANOTHER PERITONSILLAR ABSCESS OR RECURRENT TONSILLITIS RELATED TO THE AGES OF THE PATIENTS

Symptoms	Under 30 years	30 years or over	Total
Another peritonsillar abscess and/or recurrent tonsillitis	17	2	19
No symptoms	10	15	25
Total	27	17	44

(Table II). Of 27 patients under 30 years of age, 17 had had another peritonsillar abscess or recurrent tonsillitis, which was significantly more frequent than recurrent symptoms among patients older than 30 years ($0{\cdot}001<p<0{\cdot}001$).

Evaluating the occurrence of another peritonsillar abscess, the follow-up showed that 9 out of 27 patients under 30 years had had another abscess. Only 1 patient out of 17 over 30 years old presented with another abscess.

No sex relation was found in the follow-up investigation.

Discussion and Conclusions

As stated by Paradise and Bluestone (1976), most tonsil surgery is done with unproved medical indications. The possible side-effects of tonsillectomy are often pointed out with this in mind. Today we still do not know the exact role the tonsils play as part of the lymphatic system of the throat.

Among others, Sumner (1973), Beeden and Evans (1970) and McCurdy (1977) concluded that immediate tonsillectomy is the treatment of choice in any peritonsillar abscess. If this point of view is upheld, the tonsillectomy rate will clearly increase in peritonsillar abscess. Jaakkola and Johnsson (1963) reported that only one-quarter of all patients who underwent incision and drainage for peritonsillar abscess returned for tonsillectomy, even though tonsillectomy à froid had been arranged at the time of discharge from hospital.

In the selection in this series, patients with peritonsillar abscess were advised to have immediate tonsillectomy if they had had previous peritonsillar abscess or recurrent tonsillitis. This principle of selection implied that about 40 per cent were advised to have immediate tonsillectomy. However, follow-up showed that among patients with only incision and drainage, 17 out of 27 under 30 years of age had had another peritonsillar abscess and/or recurrent tonsillitis. In spite of the fact that tonsillectomy was avoided primarily in these 27 patients, 11 underwent tonsillectomy in the follow-up period. Among patients older than 30 years, only 2 had had tonsillar symptoms, and none of these were subjected to tonsillectomy.

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A high incidence of recurrent tonsillar symptoms, when treatment of peritonsillar abscess consists only of incision and drainage without tonsillectomy, is often reported. Beeden and Evans (1970) recorded a previous abscess in 16 per cent and recurrent tonsillitis in 50 per cent in a series of 111 patients admitted with a diagnosis of peritonsillar abscess. Templer *et al.* (1977), however, emphasized that the recurrence rate is not recorded in the literature. In our series, the frequency of another peritonsillar abscess was 23 per cent in 2–4 years. Among patients under 30 years of age the frequency was 33 per cent; among those over 30 years old it was 6 per cent.

In a follow-up investigation, Bonding (1976) stated that tonsillectomy à chaud as a routine treatment of peritonsillar abscess often resulted in granular pharyngitis if the patients were over 40 years old. Therefore he concluded that tonsillectomy à chaud should not be used routinely in this group of patients. In our series, 20 patients underwent tonsillectomy à chaud. These cases are discussed and the complications of the operation are presented in another report (Moesgaard Nielsen and Greisen, 1980).

We conclude that a peritonsillar abscess in patients over 30 years old should be treated with incision and drainage if they have had no previous abscess or recurrent tonsillitis. The follow-up shows that this group of patients are unlikely to present with tonsillar symptoms in the follow-up period.

On the other hand, patients under 30 years of age should be subjected to tonsillectomy à chaud, because the risk of recurrent tonsillar symptoms and the frequency of tonsillectomy during the follow-up period are unacceptably high if incision and drainage alone are performed.

Summary

The purpose of the present follow-up investigation was to evaluate the indications for tonsillectomy à chaud in the presence of a peritonsillar abscess.

Of 76 consecutive patients treated for peritonsillar abscess, 45 were treated by incision and drainage, and no tonsillectomy à froid was planned. None of these patients had had previous peritonsillar abscess or recurrent tonsillitis; therefore tonsillectomy was not indicated.

A follow-up investigation including 44 of these 45 patients showed that among patients under 30 years of age, 63 per cent had another peritonsillar abscess or recurrent tonsillitis during the follow-up period. Within an average period of 3 years, 41 per cent in this group underwent tonsillectomy. Among patients older than 30 years only 12 per cent had recurrent tonsillar symptoms, and in no case was tonsillectomy performed.

The indication for tonsillectomy à chaud is discussed, and the method is recommended as a routine in peritonsillar abscess in patients under 30 years old, whereas conservative treatment with incision and drainage is

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recommended in patients older than 30 years if the patient has had no previous peritonsillar abscess or recurrent tonsillitis.

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II. Cases treated with tonsillectomy *à chaud*

By V. MOESGAARD NIELSEN and O. GREISEN (Aalborg, Denmark)

A peritonsillar abscess is usually treated by incision and daily dilatation. This treatment is often followed by tonsillectomy four to six weeks later when the infection has passed.

The treatment of peritonsillar abscess with tonsillectomy à chaud was first proposed by Chassaignac in 1859, but owing to the fear of complications of surgery in the acute phase, conservative treatment by incision and dilatation has been preferred by many surgeons.

In recent years, however, Beeden and Evans (1970), Bonding (1973) and McCurdy (1977) have pointed out that, in the treatment of peritonsillar abscess, immediate tonsillectomy (tonsillectomy à chaud) is a safe method that causes less inconvenience to the patient.

To evaluate the treatment of peritonsillar abscess with tonsillectomy à chaud, we have performed this operation during the last four years in patients with peritonsillar abscess. All these patients had previously suffered from recurrent tonsillitis or peritonsillar abscess.

Material and Method

In a period of four years (from 1975 to 1979) tonsillectomy à chaud was performed in 56 patients with peritonsillar abscess. Of these patients 50 had previously suffered from peritonsillar abscess or recurrent tonsillitis. In six patients without preceding symptoms, tonsillectomy à chaud had to be done because of lack of co-operation in incision and dilatation in four patients, and ineffective drainage of the abscess in two patients.

The series consisted of an equal number of men and women. Their ages ranged from 21 months to 67 years, with an average of 20 years.

Immediately on admission to the ENT department, puncture and

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incision of the abscess was made. All patients were treated with antibiotics, a treatment that in most cases had been instituted before admission. The next day tonsillectomy by the method of Boyle-Davies was performed.

Results

Tonsillectomy à chaud under general anaeshesia was performed in 56 patients. In one case post-operative bleeding occurred in the tonsillar bed opposite to the site of the abscess.

Operative bleeding was slight: in two cases 300 ml., in the remaining cases less than 100–150 ml.

In three patients small remnants of the tonsils remained at the time of discharge from the hospital.

There was no difficulty in intubating these patients at operation, and in no case did spread of the infection occur locally or generally.

For all patients the temperature returned to normal within a couple of days and the post-operative course was the same in every case as in an ordinary tonsillectomy performed for recurrent tonsillitis.

The average length of hospital stay has been reduced to 3·6 days during the last year.

Discussion

Tonsillectomy à chaud will always secure an effective drainage of a peritonsillar abscess. In comparison, incision may be ineffective in the presence of deeply situated or multilocular abscesses.

Bateman and Kodicek (1959) reported that only in 41 per cent of their patients was effective drainage obtained by incision alone, while Brandow (1973) achieved effective drainage in 70 per cent of his cases.

In our own series, one patient (1·8 per cent) had post-operative bleeding, and tonsillar remnants were observed in three patients (5·4 per cent).

Among 317 patients treated with tonsillectomy à chaud, Bonding (1973) encountered post-operative bleeding which had to be treated under general anaesthesia in 2·6 per cent, and tonsillar remnants in 2·6 per cent of the patients. In 10,000 cases of elective tonsillectomy Breson and Diepeveen (1969) found post-operative bleeding requiring treatment under general anaesthesia in 2·1 per cent, and an incidence of tonsillar remnants as high as 14·7 per cent.

The incidence of operative complications is thus of the same order in tonsillectomy à chaud as in elective tonsillectomy.

A peritonsillar abscess is often followed by considerable fibrosis of the tonsillar bed. The surgical removal of the tonsil is therefore much easier to perform in the acute phase of the peritonsillar abscess than later when fibrosis has developed.

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In our own series, puncture with a large cannula and incision were made when the patient arrived at the hospital, followed by tonsillectomy à chaud on the next day.

This immediate treatment, which has also been recommended by Stermensky and Papso (1974), results in an improved general condition of the patient, with less pain and a diminished risk of respiratory problems because of the inflammatory oedema.

When tonsillectomy à chaud has been performed, it is not necessary to do the daily, often painful, dilatations of the peritonsillar abscess.

The period spent at the hospital after tonsillectomy à chaud averaged 3·6 days, which closely corresponds to the period in hospital when only conservative treatment with incision is employed. In the latter case, the first hospital stay is often followed by another after some weeks for a subsequent tonsillectomy.

Tonsillectomy à chaud thus results in a shorter definitive treatment.

Summary

The treatment of a peritonsillar abscess by tonsillectomy à chaud obviously offers advantages over the more conservative treatment with incision, daily dilatations and possibly a later tonsillectomy.

The patient avoids the painful drainage of the abscess with daily dilatations. Technically, the operation is easier to perform than later on when fibrosis has developed. The operative complications are not greater than in elective tonsillectomy, and there is no risk of spread of the infection when the patient is treated with antibiotics.

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