

Routine Histopathological Evaluation of Tonsillitis Specimens before Tonsillectomy: Analysis of Clinician Perspective and Opted Practices

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ABSTRACT

Objective: To analyses the clinicians perspective on routine histopathological evaluation of tonsillitis specimens before tonsillectomy.

Study Design: Cross sectional study.

Place and Duration of Study: ENT Department, Islamic International Medical College, Rawalpindi from 1st July 2021 to 30th June 2022.

Methodology: One hundred clinicians from both genders were enrolled and 14 questions based proforma was generated. All questions were answered in yes, no or not applicable domains. The survey was software designed and uploaded on a software post data receive. The sample size for collecting data was taken as hundred ENT clinicians were actively practicing and performing surgical procedures.

Results: The mean age of the clinicians was 41.3±5.6 years. Majority of the clinicians had an experience of 10-20 years. 32% of the clinicians only sent adult samples for hisptopathoocal asseseemtn while only 5% of the peditric cases were sent for same before tonsillectomy while there were 33% such clinicians who sent it foradults as well as pediatric cases.

Conclusion: There are more clinicians who sent adult tonsillitis specimens for histopathological assessment than pediatric cases individually while 33% are such clinicians who sent both adults and pediatrics samples for histopathological evaluation before tonsillectomy.

Keywords: Evaluation, Tonsillectomy, Histopathological assessment

INTRODUCTION

Tonsillectomy is a routine based common surgical procedure. It is performed on both children and adults. There are around 14-50 thousand of tonsillectomy performed annually in the Western world.¹ While in countries like Pakistan the incidence of tonsillectomy is around half of the cases who came with symptoms of chronic tonsillitis and obstructive sleep apnea. In general, the most common indication of tonsillectomy is recurring infections as well as obstructive sleep apnea.²⁻⁴ Tonsillectomy is not opted in conditions where there is a risk of malignancy presence in a patient.⁵

The risk of malignancy is assessed by histopathological evidences in each case before undergoing tonsillectomy as this will assist in taking proper measurements of operation on a malignant verse no malignant cells. Unfortunately, many service centers do not proceed under the available standard operating procedure and do not send all samples to the histopathology lab prior undergoing tonsillectomy.^{6,7}

Malignant tonsils are rarely reported in all over the world. However, the risk is still prevalent and could not be ignored. Tonsillectomy prior to histopathological confirmation of benign tissues is mandatory for preventing malignant related lethal complications and life threatening events. The risk of malignancy related with tonsils is very less both in adults and children with a rate as 0.01% known through a meta-analysis and 0.15% known through systematic review literature. Despite of all low risk there is still a need for proper pre assessment before tonsillectomy. Unfortunately, there are no available guidelines in this context.^{8,9} The present study was designed to conduct a routine evaluation of tonsillectomy specimens for proper risk assessments.

MATERIALS AND METHODS

This survey based cross-sectional study and included all practicing clinicians who gave their consent for participation in the study. A 14 question based proforma was generated which included various questions including that have the clinician performed tonsillitis in adults or children, did they follow the practice of sending samples to histopathology before tonsillectomy performance. All questions

were answered in yes, no or not applicable domains. The survey was software designed and uploaded on a software post data receive. The sample size for collecting data was taken as hundred ENT clinicians were actively practicing and performing surgical procedures. Patients who did not perform tonsillectomy were also asked the reason for not preferring this procedure. A total of 100 clinicians from both genders a calculation of number of responses required were generated through WHO sample size calculator where in 95% confidence of interval was taken in consideration with 10% margin of error. Queries related questions as awareness towards proper histopathology analysis before tonsillectomy as well as rate of malignancy found during all tonsillectomy were also included in the survey. Complete demographic details of the clinicians were also entered. The clinical perspective and practices opted by the clinicians were documented and an analysis of their response was performed. Data was analyzed through SPSS version 25.0.

RESULTS

The present study showed that 44% of the cases had an academic background while 56% of the clinicians were not associated with an acidic background. The mean age of the clinicians was 41.3±5.6 years. Majority of the clinicians had an experience of 10-20 years (Table 1).

32% of the clinicians only sent adult samples for hisptopathoocal asseseemtn while only 5% of the peditric cases were sent for same before tonsillectomy while there were 33% such clinicians who sent it foradults as well as pediatric cases (Fig. 1).

The annual cases of tonsillectomies conducted by various clinician's shows that most of them conduct 51-99 of annual cases followed by 10-50 cases (Table 2).

Clinician's beliefs and attitudes showed that 43% strongly disagreed that pediatrics specimens of tonsils should be assessed in unsuspected malignancy cases while only 5% strongly agreed. Similarly in the adults as well 44% strongly disagreed that Adults specimens of tonsils should be assessed in unsuspected malignancy cases while only 3% only strongly agreed (Table 3).

Table 1: Demographic details of clinicians (n=100)

Variable	No.	%
Practice-setting		
Academic	44	44.0
Not Academic	56	5.06
Age (years)		
< 30	1	1.0
30–39	31	31.0
40–49	33	33.0
50–59	16	16.0
60–70	19	19.0
Gender		
Male	62	62.0
Female	38	38.0
Fellowship-training		
Yes	63	63.0
No	37	37.0
Practice (years)		
< 5	26	26.0
5–9	15	15.0
10–20	30	30.0
> 20	29	29.0

Table 2: Frequency of tonsillectomies conducted annually

Annual tonsillectomies conducted	No.	%
< 10	28	28.0
10–50	23	23.0
51–99	32	32.0
> 100	17	17.0
Is sending specimens institutional related policy?		
Yes	53	53.0
No	47	47.0
In case of sent specimen what is the frequency of malignancy?		
0	49	49.0
1	5	5.0
2–5	3	3.0
6–10	-	-
> 10	1	1.0
Not answered	42	42.0

Table 3: Beliefs as well as Attitudes of clinicians towards specimens of tonsils assessment in unsuspected malignancy cases

Variable	No.	%
Pediatrics specimens of tonsils should be assessed in unsuspected malignancy cases		
Strongly disagree	43	43.0
Disagree	35	35.0
Neither agree nor disagree	10	10.0
Agree	7	7.0
Strongly agree	5	5.0
Adults specimens of tonsils should be assessed in unsuspected malignancy cases		
Strongly disagree	44	44.0
Disagree	33	33.0
Neither agree nor disagree	13	13.0
Agree	7	7.0
Strongly agree	3	3.0

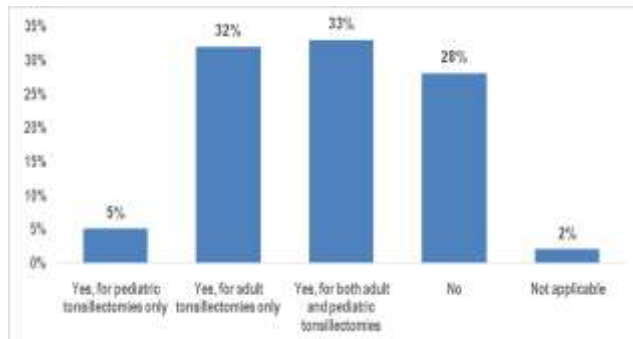


Fig. 1: Percentage of clinicians who sent tonsils specimens for malignancy assessment through histopathology before tonsillectomy

DISCUSSION

In the present research the overall response rate was found to be as high as 95% which is considered as a very good response rate. The online surveys response rate as mentioned in earlier literature is around nine to eighty percent.¹³ In this the present study context the response rate was much above the already reported. In consideration with the clinician's perspectives and opted practices it is observed that there are various research which either support the idea or oppose it. There are multiple studies which recommend no need of sending samples for histopathological verification prior to tonsillectomy as the rate of malignancy is too low in tonsillitis cases.^{3,8,9,14} On the other hand a number of studies also provides responses of the clinicians who support the idea of prior histopathological evaluation of tonsillitis specimens before tonsillectomy conduct 3-6. However as there are no consensus developed on proper guidelines in this part of the world as well as some of the western countries therefore the requirement of evaluation was a need of time.

The current research evidently reports that clinicians support the discontinuation of the tonsillectomy procedure post histopathological positive reports towards malignant cells. The similar has been reported in researches elsewhere.¹⁵ However, the criteria which seem to be generated for risk evaluation of malignancy includes previous related history of head or neck radiation exposure, tonsillar asymmetry or cervical-lymphadenopathy.¹⁶

Majority of the data received from participants presents no case of malignancy ever been reported in their practices. A similar study reported that 75% of the participants responded similar response as the current research.^{15,17-20} The justification for not sending histopathology cases includes high expense of the test which may not be afforded by most of the patients as well as low incidence of malignancy. A study from Canada reported that routine histopathology pre tonsillectomy requires \$128.65 cost.¹⁴

CONCLUSION

There are 32% and 5% Clinicians who sent tonsillitis specimens for histopathological assessment for the adult and pediatric cases while 33% of the clinicians got a histopathological evaluation of the cases before tonsillectomy both adults as well as pediatric.

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