



HISTOPATHOLOGICAL EXAMINATION OF THE FORESKIN AFTER CIRCUMCISION; IS IT IMPORTANT?

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ABSTRACT

Introduction: Circumcision is one of the most widely performed surgical procedure in the world. This study was done in Sri Lanka to determine the prevalence of various precancerous and cancerous lesions expressly affecting the foreskin. **Materials and Methods:** This is a retrospective study included 49 patients undergone at single tertiary referral centre from 2002 to 2017. Their histopathological results of foreskin biopsies was taken for this study. Data was analyzed using SPSS, version 20 statistical software. Frequencies and descriptive analysis was used to highlight the results of this study. **Results:** Of the 49 circumcised subjects, 38.8% had shown premalignant conditions and 61.2% was without premalignant conditions. Majority of the patients with premalignant conditions belonged to the group of young adults and older adults. **Conclusions:** Most of the premalignant conditions were in older adults. In paediatric age group, premalignant conditions were also detected. This shows the importance of checking histology of the foreskin.

KEYWORDS: Circumcision, Foreskin, Malignancy, Sri Lanka.

INTRODUCTION

Circumcision is one of the most widely performed surgical procedure in the world.^[1] Circumcision is surgical removal of the foreskin (the loose tissue) covering the glans of the penis which is performed for religious, cultural reasons or health reasons. Newborn circumcision diminishes the risk for cancer of the penis and lowers the risk for cancer of the cervix in sexual partners.

Circumcision is performed for various conditions, but their natural course suggests that this is not always necessary. There are also many relative indications for circumcision, including the prevention of penile cancers and the prevention of sexually transmitted infection, particularly HIV, and the prevention of urinary tract infection. Many surgeons would also perform a circumcision during surgery for hypospadias.^[2]

The most common cancers of penile are Squamous Cell Carcinomas (SCCs) originating in the epithelium covering the glans. About 10–20% of primary penile cancers originate in the foreskin. A minority of the reported cases originate in the inner foreskin in an exclusive manner. In many patients, owing to the advanced clinical stage at diagnosis, tumors are large, affecting several anatomical compartments, and the precise site of origin cannot be determined. But

knowledge about preputial precursor and associated lesions is not well understood.^[3]

The objectives of this study were to determine the prevalence of various precancerous and cancerous lesions expressly affecting the foreskin. Unless there is a suspicion the foreskin is not sent for histology as routine practice in Sri Lanka.

MATERIALS AND METHODS

Methodology

This is a retrospective study included 49 patients undergone at single tertiary referral center from 2002 to 2017. Their histopathological results of foreskin biopsies was taken for this study. The study sample was categorized in to four groups based on their age. They are paediatric group (6- 16), young adults (17-35 years), middle aged (36-55) and older adults (above 56 years).

Data was analyzed using SPSS, version 20 statistical software. Frequencies and descriptive analysis was used to highlight the results of this study.

RESULTS AND DISCUSSION

All of the uncircumcised subjects aged between 6 - 79 years and the mean age of the sample was 35.45 ± 21.026 years. Table 01 shows the age distribution of the study sample.

Table 01: Demographic characteristics of subjects.

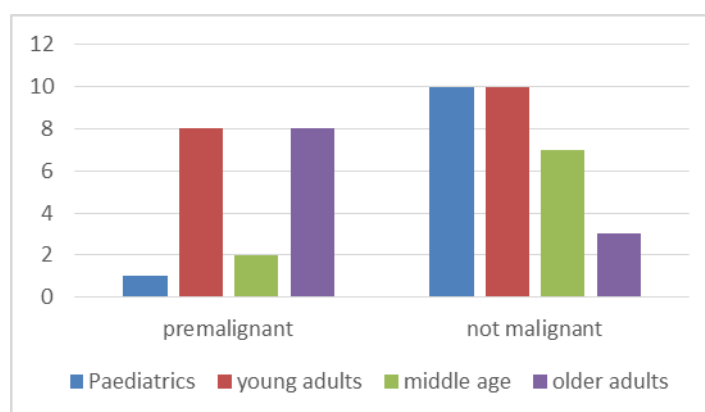
Age group	frequency	Valid Percent
Paediatrics	11	22.4
Young adults	18	36.7
Middle aged	9	18.4
Older adults	11	22.4
Total	49	100.0

Table 2: Incidence of premalignant conditions.

		Frequency	Percent	Valid Percent
Valid	Not premalignant	30	61.2	61.2
	premalignant	19	38.8	38.8
	Total	49	100.0	100.0

Of the 49 circumcised subjects, 38.8% had shown premalignant conditions and 61.2% was without premalignant conditions. Majority of the patients with premalignant conditions belonged to the group of young adults and older adults. 9.09% of circumcised paediatric group had premalignant conditions and 44.44% of

circumcised young adults showed incidence of premalignant conditions while 22.22% of middle aged group was showing premalignant conditions. Of circumcised older adults, 72.72% had malignancy based on their histology results.

**Figure 01: Premalignant conditions against age.**

It is important to implement preventative measures to minimize the incidence of disease and to improve their quality of life.^[4] Early detection is very important in disease control. And also the proper diagnostic modalities must be used in order to accurately identify the carcinoma and its progression. The use of imaging in combination with biopsy is essential in determining disease stage and grade.^[5]

The presence of an intact foreskin has been identified as an important risk factor for developing penile cancer. A study done by Maden *et al.*^[6] reported that the risk of penile carcinoma was 3.2 times greater among men who had never been circumcised compared to men circumcised at birth and 3.0 times higher among men circumcised after the neonatal period.^[7,6] In addition, penile carcinoma is rarely seen in Jews, as they are circumcised at birth as an ancient practice that has its origin in religious rites.^[7]

CONCLUSIONS

Based on our findings, we have detected a significant percentage of premalignant conditions. Most of the

premalignant conditions were in older adults. In paediatric age group, premalignant conditions were also detected. This shows the importance of checking histology of the foreskin. Usual practice after circumcision is to discharge the patient if there are no complications. But if we check the histology, these patients can be followed up to see whether they develop invasive carcinoma of the penis.

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