

AN OUTPATIENT OBSERVATION OF THE FORESKIN AMONG CHINESE CHILDREN IN HONG KONG

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SYNOPSIS

The prepuce of 1,235 Chinese children were examined. True phimosis was rare and there was a rapidly increased rate for the foreskin to be retractable in the first 3 years. Residual glando-preputial adhesions gradually regressed as the child approached puberty. Operation was rarely indicated. Our circumcision rate of 3.4% was low as compared with the Western world.

INTRODUCTION

Routine circumcision, despite its antiquity and popularity in many parts of the world, has remained a subject of extreme diversity and controversy among the medical profession.

The historical background of circumcision is interesting. Circumcision was performed in ancient Egypt: prisoners-of-wars and their descendants were identified by the ablation of their foreskins. The Phoenicians and later the Jews were circumcised. This practice became a rite and was repeatedly reported in the Old Testament (1). Ritual circumcision is also a practice among the Australian Aborigines, Moslems, American Indians and African natives, indicating the multifocal origin evolved from different civilisations.

The practice of circumcision has been rare among the Chinese in Hong Kong, although many aspects of the Western culture have been accepted by this community. This report is based on an observation of the foreskin in a group of Chinese children in Hong Kong.

PATIENTS AND METHODS

During the 6-month period from November, 1980 to April, 1981, 1,235 male children below the age of twelve attended the Sai Ying Pun General Outpatient Clinic. All were ethnic Chinese.

A history of ballooning of the foreskin when the child passed urine was recorded. In older children the actual stream was observed during micturition in the clinic. The foreskin was examined for signs of inflammation, ulceration and scarring. Preputial retraction was attempted; failure of retraction and glando-preputial adhesions were recorded. Phimosis or non-retractability was defined as tightness of the preputial orifice which prevented retraction of the foreskin to expose the glans, by gentle but steady manipulation. Incomplete preputial retraction implied the failure of the exposure of the whole of the glans penis up to the neck due to persistent adhesions.

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For those circumcised children, the parents were asked about the reasons for performing the operation.

Among the group of children studied, one was brought to the clinic due to inflammation of the foreskin with purulent discharge through the preputial orifice. All the other 1,234 children attended the clinic for reasons unrelated to the foreskin such as upper respiratory infections, infestations, infective and allergic skin conditions.

preputial retraction increased rapidly after 6-7 years old; after 10 years old this incidence increased to over 80%.

RESULTS

Of the 1,235 children under 12 years old examined, 41 children were circumcised.

Non-retractability (Fig. 1)

All the 68 babies under the age of 6 months were found to have non-retractable foreskin. This incidence decreased rapidly between 6 months and 2 years of age, and dropped to 21% in the 3-4 years old group. The incidence decreased gradually thereafter and less than 10% in the children after 8 years old were still having phimosis. In the 11-12 years old group the incidence was 4.4%.

Preputial Adhesions (Table 1)

There was a steady decrease in the incidence of glando-preputial adhesions which prevented complete retraction of the foreskin from birth to puberty. The degree of adhesions varied, but minor adhesions were common at the corona. The incidence of complete

Table 1. Incidence of completely retractable prepuce among non-circumcised children

| Age Group (Year) | No. | % |
|------------------|----------|------|
| 0 - ½ | 0/68 | 0 |
| ½ - 1 | 2/82 | 2.4 |
| 1 - 2 | 17/156 | 10.9 |
| 2 - 3 | 17/109 | 15.6 |
| 3 - 4 | 30/123 | 24.4 |
| 4 - 5 | 24/116 | 20.7 |
| 5 - 6 | 27/93 | 29.0 |
| 6 - 7 | 40/117 | 34.2 |
| 7 - 8 | 25/61 | 41.0 |
| 8 - 9 | 32/65 | 49.2 |
| 9 - 10 | 44/64 | 68.8 |
| 10 - 11 | 58/72 | 80.6 |
| 11 - 12 | 56/58 | 82.4 |
| Overall | 372/1194 | 31.2 |

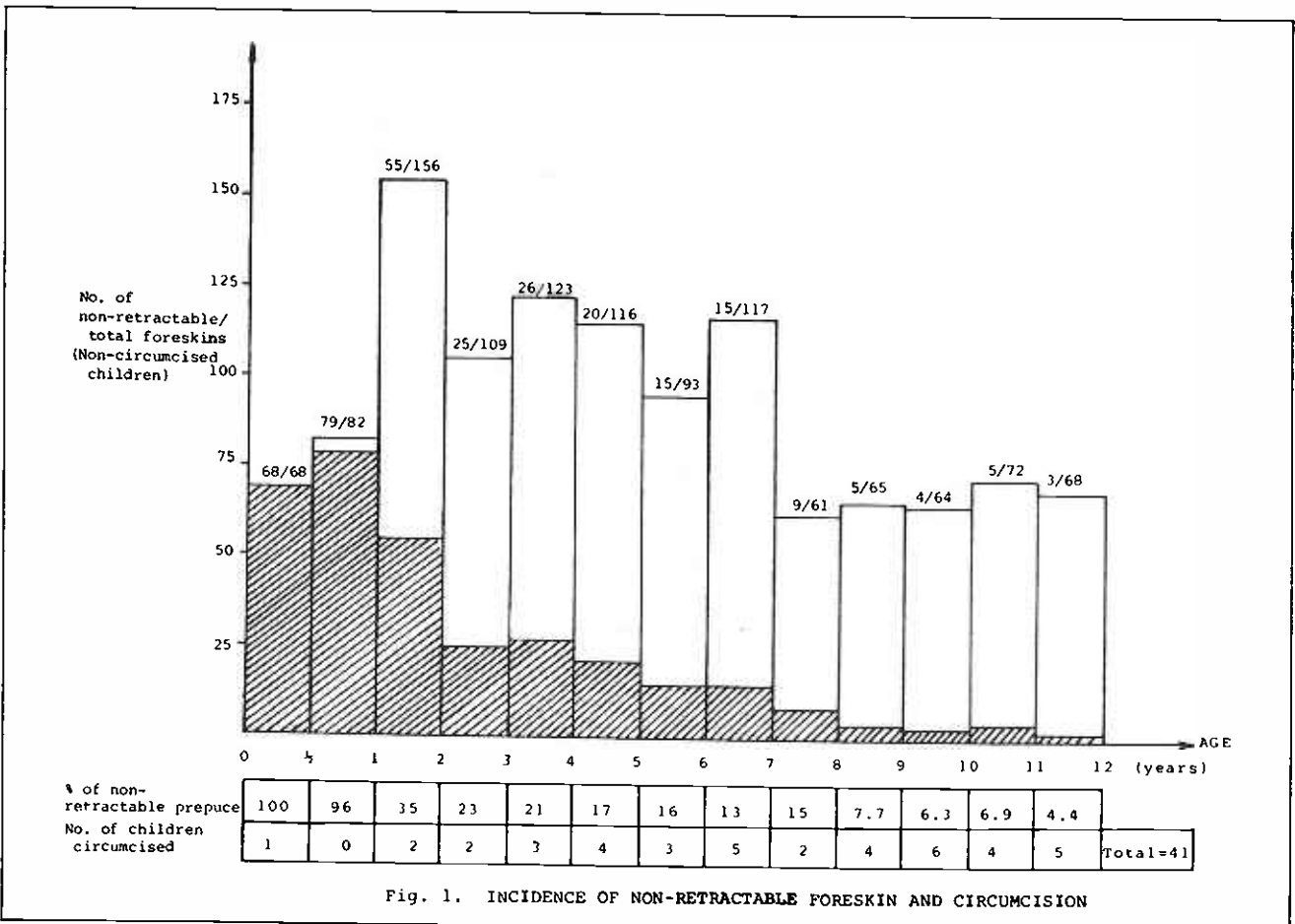


Fig. 1. INCIDENCE OF NON-RETRACTABLE FORESKIN AND CIRCUMCISION

Fig. 1 Incidence of non-retractable foreskin and circumcision.

Preputial Abnormalities

Three children, all associated with phimosis, had ballooning of the foreskin when the urinary stream was passed (Fig. 2). Their preputial orifices were pinholed. Five children had badly scarred foreskins as to prevent retraction. Four children had redness of the foreskin and among them one had purulent discharge from the preputial orifice.

Circumcision

41 (3.4%) children were circumcised (Fig. 1). There was no age preference for circumcision in this community.

The reasons as to why circumcision was performed in these children were obtained from their parents (Table 2). Fourteen children had therapeutic circumcisions: 3 children had ballooning of the foreskins, one was after zipper injury, 8 had prior attacks of inflammation of the foreskins and two had urinary tract infections. However, the majority 27 (65.9%) children were circumcised due to non-medical or indefinite reasons: familial preference, parental requests as being good for the child's general health, the hope for better penile growth during puberty, and to prevent smegma accumulation. Twelve children were circumcised because "doctors advised this was a routine operation".

DISCUSSION

The development of the prepuce starts when the

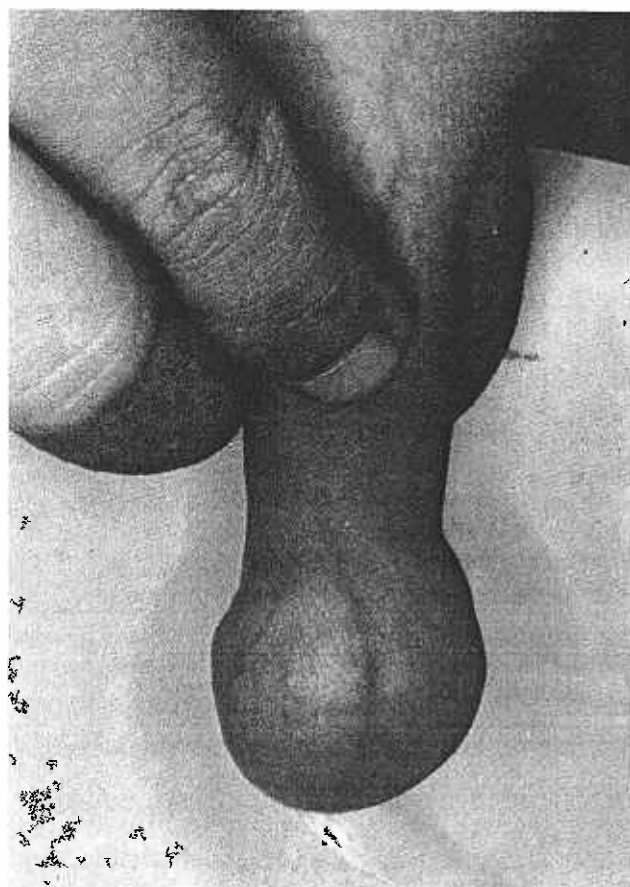


Fig. 2 An example of ballooning of the foreskin in a 11-year old child observed during micturition.

Table 2. Reasons for Circumcision (N = 41)

| | |
|-----------------------------------|----|
| Therapeutic | |
| Ballooning of foreskin | 3 |
| Zipper injury | 1 |
| Prior attacks of inflammations | 8 |
| Urinary tract infections | 2 |
| Non-medical | |
| Familial preference | 1 |
| Good for "child's health" | 3 |
| Better penile growth | 9 |
| To prevent smegma accumulation | 2 |
| Doctor advised as being "routine" | 12 |

embryo is at the 50 mm crown-rump length stage. The adjoining surfaces of the prepuce and the glans penis shares a common epithelium and persists till birth (6). It is the gradual breakdown of this epithelial glando-preputial lamella as the child grows older that the preputial skin can be retracted.

The retraction is a physiological process and occurs mainly between 1-3 years old. In the napkin-bearing age the prepuce serves a protective role against sodden clothes and napkins. By a process of desquamation and degeneration, the glans penis is gradually exposed, occasionally after attacks of inflammation or "balanitis". Forceful retraction to hurry this process can cause harm, resulting in scarring and secondary phimosis. Complete retraction is rare in young children due to residual adhesions which gradually breaks down as the child reaches puberty. Our observations support the conclusions given by Gairdner (4) and Oster (8) that unnecessary operations and even harmful complications can be avoided if the normal development of the prepuce is patiently awaited.

The incidence of circumcision among the Chinese children in Hong Kong is low when compared with figures from the Western world. This study reflects the state of the prepuce and the prevalence of circumcision among a group of Chinese children who attended a general outpatient clinic in Hong Kong. The observed circumcision rate of 3.4% is very low when compared with the Australian 70% (3), but is close to the British 6% (2). In United States (2), the incidence was 80-90%. In Canada (9), the incidence varied greatly among provinces, from 2 to 70%.

Should circumcision be routinely practised? Those in favour of it displayed statistical data to support the lower incidence of carcinoma of the cervix in their partners, and carcinomas of the penis and the prostate in the circumcised males. This has to be balanced against its potential complications and cost-effectiveness (5, 7). It is interesting to know the Australian Paediatric Association, the Committee on Fetus and the Newborn of the American Academy of Pediatrics, and the National Health Service of United Kingdom have declared against "routine" circumcision in the neonatal period.

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