*Indian Journal of Plastic Surgery* (1987), 20(2), pp. 105-109

# CIRCUMCISION AND SOCIO-MEDICAL ETHICS

T. C. Goel, D. Dalela and P. K. Agarwal

Circumcision in males is one of the most ancient operations and has been around for over 5,000 years (Sandeman, 1985). It began as a religious ritual in Egypt or African tribes and then was taken over by Jews and Muslims being a Divine commandment to Abraham some 3,600 years ago.

"This is my covenant, which you shall keep, between me and you and he that is eight days old shall be circumcised among you, every male throughout your generations....." (Genesis 17 : 12).

Then came the evidences for its prophylactic value in carcinoma penis and other diseases and the circumcision became routine in many countries. Contrasting view points were offered by others who felt that it is akin to "The rape of Phallus" (Morgan, 1965) and "Penile Plunder" (Morgan, 1967). We have been performing circumcision quite commonly and have also been observing both uncircumcised and circumcised states and therefore wish to present our viewpoint on the subject.

*Circumcision and Cancer of Penis*

The statistical analysis shows that no more than 1 in 20,000 men at some stage in their lifetime develop carcinoma penis. The idea of circumcising 20,000 neonates in hope of preventing one case of cancer 50 years later is not appealing (Howarth, 1982; Pollinitz, 1986). Gillis (1978) reported that there are more deaths caused by circumcision complications than cancer of penis.

It has been suggested that increased incidence of carcinoma of penis may be due to poor genital hygiene that is common in uncircumcised (Dean, 1935; Schrek and Lenowitz, 1947). We have clinically and histologically studied the changes in the lining epithelium of preputial sac in 123 persons of different grades of genital hygiene and have found that in cases with poor genital hygiene the epithelium shows parakeratosis, acanthosis, chronic inflammatory cellular infiltration in subepithelial zone, prolonged rete pegs, dyskeratosis and even dysplasia in significantly higher number of cases as compared to those who maintain good genital hygiene (Figs. 1, 2, 3). The degree of these changes is proportional to the duration of exposure of the preputial sac lining to smegma. In circumcised individuals, on the other hand, preputial sac is laid open and smegma does not collect. No extra effort is needed to maintain local hygiene. In accordance, the lining epithelium in them has been remarkably free from such changes. We have thus established that it is good genital hygiene, not the circumcision, which may play a role in prevention of carcinoma penis. A job which can be done by regular washing does not justify routine circumcision.

*Circumcision and Carcinoma Cervix*

The relationship between Carcinoma cervix and circumcision status of woman's sexual partner is debatable. Handley (1936) first drew attention to this by commenting that incidence of cervical cancer among the partners of circumcised Fijians was one tenth of that among the partners of Indians in the same island who generally were uncircumcised. These findings parallel studies done among Muslims (Rao et al., 1959; Wahi et al., 1972). But Khanolkar (1950) found just the opposite result in a different population. He showed that there was more cervical cancer in one group of women whose husbands were circumcised when compared with another group whose husbands were not. Aitken-Swan and Baird (1965) could find no significant association between circumcision and cancer of cervix. Until the

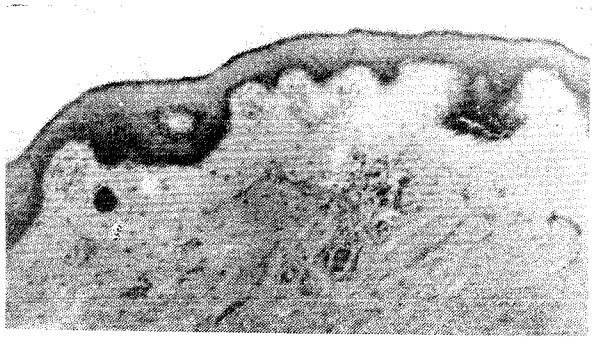

Fig. 1. Histomicrograph of lining epithelium of preputial sac in a male with good genital hygiene, showing scarce chronic inflammatory cells and small rete pegs.

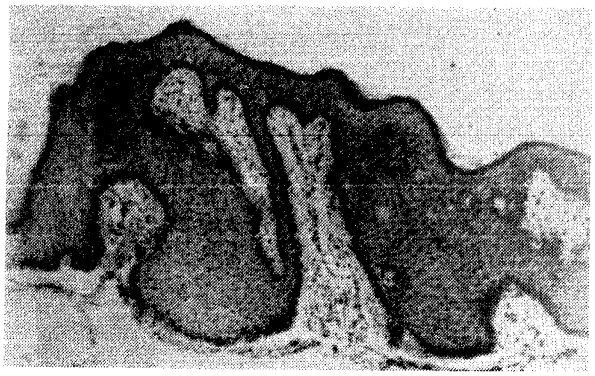

Fig. 2. Histomicrograph of preputial sac lining in a male with poor genital hygiene showing acanthosis and severe chronic inflammatory cellular infiltration in subepithelial zone.

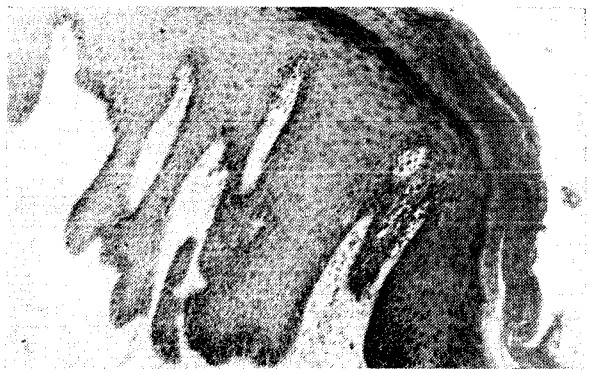

Fig. 3. Histomicrograph of preputial sac lining in a male with poor genital hygiene showing parakeratosis prolonged rete pegs and intense chronic inflammatory cellular infiltration in subepithelial zone.

time this controversy is settled, doing prophylactic circumcision on this ground will stand unjustified.

Thus analysis of all indications of prophylactic circumcision show that benefits of this procedure are not very convincing and pragmatic, certainly not enough to sacrifice the autonomy of the individual in this outrageous manner (Skipper, 1982).

## Discussion

The functions of prepuce have been well highlighted by Lakshmanan et al. (1980) and Goel et al. (1986). The prepuce wraps the glans like a hosiered material and protects it from injuries and insect bites etc. This is understandably more pertinent in infants and children and may be because of this "Mother Nature" has made prepuce adherent to glans in most of infants (Gairdner, 1949). It also prevents the external urinary meatus from mechanical and chemical trauma. It has been found that meatal ulcer and meatal stenosis commonly follow circumcision. As regards its role in sexual function, much has been written. Circumcision by permanently exposing the glans causes epithelial changes that decrease its sensitivity (Burger and Guthrie, 1974; Preston, 1970). Whether this is an advantage or disadvantage is subject of conjecture. According to Morgan (1967) coitus without a foreskin "is like viewing a Renoir or

a Van Gogh while colourblind". The prepuce is said to decrease the likelihood of dyspareunia by lubricating the glans and easing penetration (Morgan, 1967; Goel et al., 1986). Others argue that decreased glandular sensitivity reduces the incidence of premature ejaculation.

The value of preserving the prepuce on the other hand, is quite well-known to the Plastic and Reconstructive Surgeons. The preputial skin is not only the thinnest in body but also hairless and glandless (Dalela et al., 1988). Because of these properties, this has proved to be most suited material for meatoplasties and substitution urethroplasties (Turner-Warwick, 1985) and also a good source of spare skin for resurfacing other delicate regions. Parkash (1982) have used it to replace nearly the whole of bulbar and fornicial conjunctiva in a case of squammous cell carcinoma of conjunctiva and also used it for correcting burn contracture of upper lids in two cases. Perino et al. (1983) have used preputial skin for mandibular vestibuloplasty with good results. The inner lining of prepuce is surprisingly not involved in cases of superficial spreading gangrene (Paul, 1963) and filarial elephantiasis of penis (Bowesman, 1986). Exact cause of this phenomenon is not known. This inner layer can be rolled back and utilised as a skin cover for penis in these conditions.

Lastly, one must not forget that circumcision, like any other procedure is accompanied by both morbidity and mortality (Kaplan, 1983) The incidence of complication of neonatal circumcision found in the literature ranges from as low as 0.06% (Speert, 1950) to as high as 38% (Leech, 1970). Apart from haemorrhage and infection, at least a dozen different types of complications have been reported (Warner and Strashin, 1981; Kaplan, 1983).

Thus it is obvious that by doing prophylactic circumcision we gain probably nothing but rather suffer a substantial and unwarranted loss. Wallenstein (1985) after extensively reviewing the literature also concluded that circumcision should not be done as it does not prevent diseases. The same has been suggested in a statement from the American Academy of Paediatrics, and the American College of Obstetrics and Gynaecology that there is no absolute medical indication for circumcision of new born (AAP, 1983). It may not be out of place to quote Sir James Spense of Newcastle (1964)—"The anatomist have not studied the form and evolution of prepuce....they do not understand that 'Nature' does not intend it to be stretched or retracted.... Nature is a possessive mistress and whatever mistakes she makes about the structure of the less essential organs such as the brain and stomach in which she is not much interested, you can be sure that she knows best of the genital organs." We therefore should unanimously agree to Hackett (1984) who in the concluding note in his erudite talk stated—"It is time we cut short this Foreskin Saga by no longer cutting it short."

**Conclusion**

Based on our own personal observations and evidences gleaned from literature, we have attempted to proselytize professional colleagues to abandon the 'prophylactic circumcision'. The four points which have been highlighted herein are (i) that there is no conclusive evidence that circumcision prevents diseases; (ii) the operation of circumcision is associated with significant morbidity and mortality and therefore can not be taken lightly; (iii) the foreskin is not 'useless', it serves important functions; (iv) and the foreskin, by virtue of its structure, is a reserve skin which may later be used in a variety of ways for reconstructive operations on penis and also on other areas of the body.

## REFERENCES


1. Aitken-Swan, J. and Baird, D. : Circumcision and cancer of cervix. Br. J. Cancer, 1965; 19 : 217-227.
2. American Academy of Paediatrics and the American College of Obstetricians and Gynaecologists : Guidelines for perinatal care. 1983. Edited by A. W. Brann and R. C. Defalo. Evanston, Illinois : American Academy of Paediatrics, p. 87.
3. Bowesman, C. (1986), cited by Rains, A. J. H. and Ritchie, H. O. : In Bailey and Love's Short Practice of Surgery. English Language Book Society. H. K. Lewis, 1986, pp. 1273.
4. Burger, R. and Guthrie, T. H. : Why circumcision ? Paediatrics. 1974; 54 : 362-364.
5. Burkitt, O. P. : Distribution of cancer in Africa. Proc. R. Soc. Med., 1973; 66 : 312-314.
6. Dagher, R., Selzer, M. L. and Lapides, J. : Carcinoma of the penis and the anti-circumcision crusade. J. Urol. 1973 ; 110 : 79-80
7. Dalela, D., Goel, T. C. and Agarwal, P. K. : A clinico-cyto-histopathological study of chronological changes in preputial sac in circumcised and uncircumcised male (Thesis submitted for M.S.), 1988. pp. 6.
8. Dean, A. L. Jr. : Epithelioma of penis. J. Urol., 1935; 33 : 232-234.
9. Gairdner, D. : The fate of the foreskin. A study of circumcision. Br. Med. J. 1949; 2 : 1433-1437.
10. Gillis, S. S. : Circumcision. Am. J. Dis. Child. 1978; 132 : 1168-1169.
11. Goel, T. C. : Carcinoma penis. Quarterly Medical Review, 1986; 37(2) : 1-36.
12. Goel, T. C., Chandra, H. and Dubey, P. C. : Some observations in the circumcised patients : Functions of the prepuce. Ind. J. Surg. 1986; 48(12) : 454-456.
13. Gursel, E. O., Georgountzos, C., Uson, A. C., Melicow, M. M. and Veeremi, R. J. : Penile cancer—Clinical-pathologic study of 64 cases. Urology 1973; 1 : 569-578.
14. Hackett, E. : The foreskin saga. Med. J. Aust. 1984; 142 : 187-189.
15. Handley, W. S. : Prevention of cancer (Mitchell Banks Memorial Lecture). Lancet. 1936; 1 : 987-991.
16. Howarth, J. C. : Circumcision. Can. Med. Assoc. J. 1982; 126 : 1278.
17. Kaplan, G. W. : Complications of circumcision. Urol. Clin. North America. 1983; 10(3) : 543-549.
18. Khanolkar, V. R. : Cancer in India. Int. J. Cancer (Copenhagen) 1950; 6 : 881-886.
19. Klauber, G. T. : Circumcision and phallic fallacies or the case against routine circumcision. Conn. Med. 1973; 37 : 445-448 cited by Outerbridge et al. 1982.
20. Lakshmanan, S. and Parkash, S. : Human prepuce—some aspects of structure and function. Ind. J. Surg. 1980; 42 : 135-137.
21. Leitch, I. O. W. : Circumcision. A continuing enigma. Aust. Paediatr. J. 1970; 6 : 59-65.
22. Morgan, W. K. C. : The rape of the phallus JAMA. 1965; 193 : 223-224.
23. Morgan, W. K. C. : "Penile plunder". Med. J. Aust. 1967; 1102-1103.
24. Outerbridge, E. W., Beaudry, G. G., Chance, S. B., Mac. Murray and Pendray, M. R. : Benefits and risks of circumcision : Another view. Foetus and Newborn Committee, Canadian Paediatric Society. Can. Med. Assoc. J. 1982; 126 : 1399.
25. Parkash, S. : Is routine circumcision necessary ? J. Ind. Med. Assoc. 1982; 78(9 & 10) : 150-151.
26. Paul, M. : Superficial Spreading Cellulitis of penis. Br. J. Surg. 1963; 227 : 897.
27. Perino, K. E. et al. : Mandibular vestibuloplasty with full thickness skin graft of prepuce. J. Oral Maxillofacial Surg. 1983; 41(10) : 664-666.
28. Pollinitz, R. : Foreskin facts. Med. J. Aust. 1986; 144 : 108.
29. Preston, E. N. : Whither the foreskin ? A consideration of routine neonatal circumcision. JAMA. 1970; 213 : 1853-1858.
30. Rao, P. S., Reddy, R. S. and Reddy, D. J. : A study of the aetiological factors in carcinoma in Guntur. J. Indian Med. Assoc. 1959; 32 : 463-470.
31. Sandeman, T. F. : Foreskin facts. Med. J. Aust. 1985; 143 : 479.
32. Schrek, R. and Lenowitz, H. : Etiologic factors in carcinoma of the penis. Cancer Res., 1947; 7 : 180-187.
33. Skipper, G. E. : Circumcision. Can. Med. Assoc. J. 1982; 126 : 1278.
34. Spence, J. : On circumcision. Lancet. 1964; 2 : 902.
35. Speert, H. : Circumcision of the newborn : An appraisal of its present status. Obstet. Gynaecol. 1953; 26 : 164-172.
36. Turner-Warwick, R. : The principles of urethral reconstruction. In : Rob & Smith's operative Surgery (Ed. Dudley, H. & Corter, D.) 4th Ed. 1983; pp. 480-522.
37. Wahi, P. N., Luthra, U. K., Mali, S. and Shinokin, M. B. : Prevalence and distribution of cancer of the uterine cervix in Agra district. Indian J. Cancer. 1972; 30 : 720-725.

38. WALLENSTEIN, E. : Circumcision. The uniquely American medical enigma. Urol. Clin. N. Amer. 1985; 12 : 123.
39. WARNER, E. AND STRASHIN, E. : Benefits and risks of circumcision. Can. Med. Assoc. J. 1981; 125 : 967-977.

**The Authors**

PROF. T. C. GOEL, *Professor*, Department of Surgery, K. G.'s Medical College, Lucknow.
DR. D. DALELA, *Senior Resident*, Department of Surgery, K. G.'s Medical College, Lucknow.
PROF. P. K. AGARWAL, *Professor*, Postgraduate Department of Pathology, K. G.'s Medical College, Lucknow.

**Request for Reprints**

DR. T. C. GOEL, *Professor*, Department of Surgery, K. G.'s Medical College, Lucknow.