A

Although circumcision remains controversial, it is still a common procedure. The percentage of circumcised males varies by geographic location, by religious affiliation, and to some extent, by socioeconomic classification. Currently, about one quarter of men in the world are circumcised, largely concentrated in the United States, Canada, countries in the Middle East and Asia with Muslim populations, and large portions of Africa. South Korea has possibly the largest absolute number of teenage or adult circumcisions anywhere in the world. Because circumcision started through contact with the American military during the Korean War, South Korea has an unusual history of circumcision and circumcision has traditionally been practised. However, there are few data to help estimate accurately the prevalence of circumcised males in South Korea because there has been no real community based epidemiological study of circumcision. The present study sought to assess the prevalence of circumcision in Korean young men dwelling in the community of Choong-chung South Province, investigate attitudes and perspectives about circumcision, and how they perceive physician involvement in the decision process.

METHODS
Since South Korea has adopted the conscription system, all men should be examined at the Military Manpower Administration when they are 20 years old. In 2001, 27,202 men aged 20 years lived in the community of Choong-chung South Province. Between May and November 2001, this cross sectional survey was performed separately from the overall military fitness examination. Of men aged 20 years dwelling in the community, 2700 were randomly selected at a 10.0% sampling fraction after a sampling process by census district and a total of 1742 (64.5%) agreed to participate in the study. These subjects completed self administered questionnaires and we included 1674 men (a response rate 62.0%) in the study.

RESULTS
The overall proportion of circumcised was 1306 (78.0%) and an additional 192 (11.5%) wished to be circumcised later. Circumcision was carried out mostly during their elementary and middle school years. Of men circumcised, the decision whether to circumcise was most often made by their parents. Of the subjects, 75.0% believed that circumcision is necessary, while 2.9% believed it to be unnecessary. Among those who believed circumcision to be necessary, the most common reason was to improve penile hygiene (89.1%).

Conclusions: Our results indicate a positive attitude toward circumcision in South Korean men, linking it with hygienic practices. Circumcision in South Korea depends on the perpetuation of cultural beliefs that support it.
necessary, the most common reason was "no medical benefit" (2.1%). Among those who did not believe circumcision to be necessary, the reasons included "not under pressure" (6.2%) and "to improve future sexual potency" (8.9%). The principal reasons given for circumcision were "to improve penile hygiene" (89.1%), followed by "to reduce peer pressure" (76.0%) versus 53.8%, p <0.001). While 40.6% regarded circumcision as a rite of passage to adulthood, 42.4% responded that they did not know. Regarding other questions about the prevention of cancers or infections of others, almost more than half of the subjects responded that they did not know. The results are summarised in table 1.

**DISCUSSION**

Circumcision has benefits and advantages as well as risks and disadvantages. Reported benefits of circumcision include reduction in the risk of penile cancer, urinary tract infections, and sexually transmitted diseases. However, risks associated with circumcision such as bleeding, penile injury, local infection, and the consequences of the pain experience are valid concerns that require appropriate responses. In 1995, the American Academy of Pediatrics (AAP) Committee on Bioethics stressed the importance of involving children in decisions concerning their health care. The committee counselled physicians to view children as people in their own right. Although the AAP Committee on Bioethics is specifically concerned with newborn circumcision, the committee’s concern with children’s involvement is very appropriate in non-therapeutic circumcision of adolescents as practised in South Korea.

South Korea has an unusual history of circumcision. Although circumcision in South Korea has been strongly influenced by American culture, it has never been predominantly neonatal. It is unclear why South Korean circumcision has never been neonatal, in stark contrast with the practice in the United States. Pang and Kim blamed South Korean doctors for high circumcision rate since the mistaken and outdated notions about circumcision and lack of knowledge of phimosis by physicians were a leading contributory factor. In our study, however, the decision whether to circumcise or not was most often made by parents or children. The healthcare providers made only 4.8% of the decision. Furthermore, 82.8% of the subjects thought the choice of the child should be most important in the decision making, while only 27.8% of these individuals actually made that choice. Since the operation is a rite of passage to adulthood, 42.4% responded that they did not know. Regarding other questions about the prevention of cancers or infections of others, almost more than half of the subjects responded that they did not know. The results are summarised in table 1.

**Table 1** Responses to questions about medical benefits and other common notions of circumcision

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think that circumcision helps penile hygiene?</td>
<td>Yes 1190 (71.1) No 35 (2.1) I don’t know 449 (26.8)</td>
</tr>
<tr>
<td>can help penile hygiene?</td>
<td>743 (44.4) 48 (2.9) 883 (52.7)</td>
</tr>
<tr>
<td>can prevent penile cancer?</td>
<td>694 (41.5) 59 (3.5) 921 (55.0)</td>
</tr>
<tr>
<td>can prevent urinary tract infection?</td>
<td>669 (40.0) 179 (10.7) 826 (49.3)</td>
</tr>
<tr>
<td>can prevent sexually transmitted infection?</td>
<td>364 (21.7) 365 (21.8) 943 (56.3)</td>
</tr>
<tr>
<td>can prevent AIDS?</td>
<td>398 (23.8) 218 (13.0) 1058 (63.2)</td>
</tr>
<tr>
<td>can prevent cervical cancer of your partner?</td>
<td>538 (32.1) 123 (7.3) 1013 (60.5)</td>
</tr>
<tr>
<td>can prevent genital infection of your partner?</td>
<td>246 (14.7) 285 (17.0) 1143 (68.3)</td>
</tr>
<tr>
<td>can prevent premature ejaculation?</td>
<td>199 (17.9) 234 (14.0) 1141 (68.2)</td>
</tr>
<tr>
<td>can enhance sexuality?</td>
<td>246 (14.7) 338 (20.2) 1090 (65.1)</td>
</tr>
<tr>
<td>is a rite of passage to adulthood?</td>
<td>679 (40.6) 284 (17.0) 710 (42.4)</td>
</tr>
</tbody>
</table>

*Data presented are number (%) of answers.

---

**Figure 1** Ages at which circumcision was performed in South Korean men.
performed on older males in South Korea, we believe that their criticism was somewhat exaggerated.

The timing of circumcision may be of questionable medical value. The child is no longer a part of the decision making process when circumcision is performed during the neonatal period, which may have been directed toward the inhumanity. Neonatal circumcision subjects male infants to be an operation that they may well reject if they were old enough to consider its advantages and disadvantages. However, urinary tract infections are higher in infancy than during the other period, balanoposthitis is more common during the early childhood, and there are potential benefits including local anaesthesia, no suture, low complication rate, low cost, no memory of the event, and fast healing time when circumcision is performed during the neonatal period.13

Contrary to previous reports,3,4 we did not find that many men accepted the procedure as a “rite of passage” or “peer pressure.” In addition, they did not believe that circumcision is good for the prevention of premature ejaculation or prolonging of intercourse. In our subjects, most believed that circumcision could enhance penile hygiene. Circumcision has been suggested as an effective method of maintaining penile hygiene since the time of the Egyptian dynasties. Good personal hygiene may prevent the disorders associated with the uncircumcised state, but there are no scientific data to support this speculation.6 However, various studies suggest that genital hygiene needs to be emphasised as a preventive health topic throughout a patient’s lifetime7–10 and ease of cleanliness is still the most common reason parents choose circumcision in the United States.11 Our results indicate a positive attitude toward circumcision in South Korean men, linking it with hygienic practices. Circumcision in South Korea depends on the perpetuation of cultural beliefs that support it.

CONTRIBUTORS

JHK, conceptualisation of project, study design, collection of data, analysis, interpretation and principal author of manuscript; MEK, conceptualisation, project design, interpretation and reviewing manuscript; YHK, conceptualisation of project, study design, collection of data, analysis, interpretation and principal author of manuscript; NK Lee, conceptualisation, project design, data analysis and interpretation; NKL, conceptualisation, project design, interpretation and reviewing manuscript. There was no source of funding for this research project. There are no conflicts of interest.

Key messages

- Circumcision was carried out mostly during elementary and middle school years in South Korea.
- The decision whether to circumcise was most often made by parents among circumcised men in South Korea.
- Most believed that circumcision is necessary and circumcised men rather than uncircumcised men felt more positively in South Korea.
- Circumcision in South Korea depends on the perpetuation of cultural beliefs that support it.

Authors’ affiliations

J H Ku, Department of Urology, Military Manpower Administration, Seoul, Korea
M E Kim, Department of Urology, Soonchunhyang University School of Medicine, Bucheon, Korea
N K Lee, Department of Urology, Soonchunhyang University School of Medicine, Chonan, Korea
Y H Park, Department of Urology, Soonchunhyang University School of Medicine, Seoul, Korea

Correspondence to: Dr Ja Hyeon Ku, Department of Urology, Military Manpower Administration, JoongAng Shingagam, San 159-1, Shinggil 7-dong, Youngdeungpo-Ku, Seoul 150-057, Korea; randyku@hanmail.net

Accepted for publication 2 September 2002

REFERENCES