

References

1. De-Souza DA, Aitken M. Prevention of injuries to children and adolescents. *Adv Pediatr.* 1998; 45: 37-72.
2. World Health Report 2001 Database. Geneva, WHO, 2002
3. Injuries in the South East Asia Region: Priorities for Policy and Action. WHO, SEAR, 2002.
4. Rahman A, Shafinaz S, Linnan M, Rahman M. Bangladesh health and injury survey: Report on children. Dhaka, DGHS, UNICEF, TASC, 2005.
5. Mashreky SR, Rahman A, Chowdhury SM, Giashuddin S, Svanström L, Linnan M, Shafinaz S, Uhaa IJ, Rahman F. Epidemiology of childhood burn: Yield of largest community based injury survey in Bangladesh. *Burns.* 2008.
6. http://www.keepkidshealthy.com/welcome/safety/burn_safety.html
7. Daisy S, Mostaque AK, Bari TS, Khan AR, Karim S, Qamruzzaman Q. Socio-economic and cultural influence in the causation of burns in the urban children of Bangladesh. *J Burn Care Rehabil.* 2001; 22: 269-73.
8. Verma SS, Srinivasan S, Vartak AM. An epidemiological study of 500 pediatric burn patients in Mumbai, India. *Indian J Plast Surg.* 2007; 40: 151-57.
9. Cheng JC, Leung KS, Lam ZC, Leung PC. An analysis of 1704 burn injuries in Hong Kong children. *Burns* 1990; 16: 182-84.
10. Mukerji G, Chamania S, Patidar GP, Gupta S. Epidemiology of pediatric burns in Indore, India. *Burns* 2001; 27: 33-38.

Management of vaginal agenesis by modified McIndoe operation and mould made of sponge and condom

Vaginoplasty is a surgical procedure whose purpose is to treat vaginal structure defect¹. Vaginal agenesis is estimated to occur in 1 in 4,000-5,000 live female births². These patients are usually managed by different surgical procedure but the long-term outcome is controversial. Among various methods McIndoe technique has remained most popular³, here split thickness skin graft is used to line the neovagina. The main advantages are its simplicity and low morbidity. The disadvantages are graft contraction, fistula formation and need for long-term use of vaginal retainer.

The current study has been designed to find out the outcome of vaginoplasty done by modified McIndoe method where instead of skin graft a mould made by sponge and condom has been used for long period to maintain the space and to allow epithelialization.

Fifteen patients with vaginal agenesis were included. A transverse incision was given on the

introitus and then a space was created in between the urethra and bladder in front and rectum behind by blunt finger dissection. The created space is about 12 cm in length and 5 cm in diameter. A mould made by sponge and condom was placed in the newly created space. 3/4 stitches were given through the inner aspect of the labia over the mould so the mould could not come out. After 7 days mould was removed. Another freshly prepared mould was placed in the space as before. All the process was repeated weekly for another two/three times. Then the patients were asked to wear the mould continuously for three months and then at night for another three months. Thereafter they were advised for daily dilatation with the mould or practiced regular coitus. Married women were allowed to perform physical relation after 6 weeks. The patients were advised to come for follow-up after 1 month, 3 month and 6 month.

Forty percent patients were married. Operative complications were rectal injury in one case and moderate bleeding in two cases. Three patients developed secondary hemorrhage and one patient developed wound infection. Vaginal stenosis was not developed in any patient during follow-up period; depth of the vagina slightly reduced in one case, that patient did not wear the mould regularly. Sexual relation was satisfactory in all married women.

Management of vaginal agenesis constitutes a significant challenge for the surgeons. From the historical perspective, the main difference among the various surgical approaches lies in the tissue and mould used to line the neovagina. The amnion is often used as a homograft but failure rate is high⁴. Vecchiëtis laparoscopic procedure is complicated and associated with discomfort⁵. Sigmoid neovagioplasty offers some advantages as the gut is distensible and self-lubricating but procedure is complicated⁶. The current technique was simple, there were no major complications encountered during this operation and follow-up period. All married patients reported satisfactory sexual relationship after the operation.

In conclusion, management of vaginal agenesis by modified McIndoe operation and sponge-condom made mould is simple and safe, complications are few and manageable and final result is good with vagina of satisfy dimension.

Nurun Nahar Khanam, Sayeba Akhter, Nusrat Rahman and Jakia Sultana Runa

Department of Obstetrics and Gynecology, Bangabandhu Sheikh Mujib Medical University, Shahbag Dhaka, Bangladesh.

DOI: 10.3329/bmrcb.v35i1.2318

References

1. Vaginoplasty. Wikipedia, the free encyclopedia. www.en.wikipedia.org. Access on 6-10-2008.
2. Caparo VJ, Gallego MB. Vaginal agenesis. Am J Obstet Gynecol. 1976; 124: 98-107.
3. Saraf S, Saraf P. McIndoe vaginoplasty. Internet J Gynecol Obstet. 2007; 6: 1-8.
4. Carvalho, Ramalho B, Reis, Maria R, MOURA, Dias M. Neovaginoplasty using amnion in Mayer-Rokitansky-Kuster-Hauser syndrome. Rev Bras Ginecol Obstet. 2007; 29: 619-24.
5. Fidele L, Bianchi S. Laparoscopic creation of a neovagina in patients with Rokitansky syndrome: Analysis of 52 cases. Fertil Steril. 2000; 74: 384-89.
6. Franz RC. Sigmoid colon Vaginoplasty: A modified method. Br J Obstet Gynecol. 1996; 103: 1148-55.
7. Rajimwale A, Furness PD, Brant WO, Koyle MA. Vaginal construction using sigmoid colon in children and young adults. BJU Int. 2004; 94: 115-19.

Prevalence and antibiotic susceptibility pattern of methicillin resistant *Staphylococcus aureus* at Armed Forces Hospital in Saudi Arabia

Methicillin-resistant *Staphylococcus aureus* (MRSA) is well recognized as a major cause of nosocomial infections worldwide and is associated with high morbidity and mortality rates with rapid development of resistance. MRSA has become established outside the hospital environment and is now appearing in community populations without identifiable risk factors¹. The traditional treatment for infections caused by MRSA is vancomycin, which is indicated for treatment of antibiotic-associated pseudomembranous colitis caused by *Clostridium difficile*. First described in 1944, penicillinase-producing strains of *S. aureus* became universally present in hospitals in the 1950s and dominant in the community in the early 1970s². Methicillin was introduced in 1959 as the first beta-lactamase-resistant penicillin, but outbreaks of MRSA infections were reported in Europe soon thereafter, and nosocomial MRSA strains are now distributed worldwide³⁻⁴. MRSA organisms generally are resistant to multiple antibiotics, including aminoglycosides, macrolides, fluoroquinolones, clindamycin, trimethoprim-sulfamethoxazole, chloramphenicol, and beta-lactams. Though vancomycin resistant *S. aureus* is not widely seen, a low level resistance to vancomycin is being reported⁵. Hence, the knowledge of the prevalence of MRSA and their antimicrobial susceptibility pattern becomes

necessary in the selection of appropriate empirical treatment.

In this study, an attempt was made to determine prevalence of MRSA and methicillin sensitive from different clinical specimens and their *in vitro* susceptibility pattern to various antimicrobial agents in our hospital.

A total of 689 clinical specimens such as pus, wound swabs, ear swabs, aspirates, and sputum were received at Armed Forces Hospital, Al-Kharj over a period of three years from November 2004 to October 2007. All the specimens were processed in the microbiology section of the laboratory medicine. Cultures positive for *S. aureus* were identified. All specimens were processed using standard methods for the isolation of clinically significant pathogens including *S. aureus*. Specimens were inoculated on 5% sheep blood agar, MacConkey agar and Mannitol salt agar plates. The plates were incubated at 37°C for 24-48 hours. Identification of the isolates was based on Gram film, colonial morphological appearance and by positive catalase, coagulase and DNase test⁶. A total of 166 *S. aureus* were isolated from various clinical specimens.

All isolates were screened for oxacillin resistance as described elsewhere⁷ using oxacillin disc (1 µg) obtained from DIFCO. A zone of inhibition less than 10 mm was indicative of methicillin resistance. Standard disc diffusion tests for penicillin G (10 U), ampicillin (10 µg), erythromycin (15 µg), tetracycline (30 µg), gentamicin (10 µg), cephalothin (30 µg), sulphamethoxazole-trimethoprim (25 µg), clindamycin (2 µg) and vancomycin (30 µg) were carried out by modified Kirby Bauer method⁷. Zone sizes were measured and interpreted according to the National Committee for Clinical Laboratory Standards.

Out of 166 isolates of *S. aureus*, 37 (22.3%) were found to be MRSA. Of these 22.2% were from pus, 23.8% were from wound swabs, 33.3% were from aspirates and 13.3% were from sputum (Table I).

Table I: Isolation of *Staphylococcus aureus* from different clinical specimens

Specimen	Total no. of <i>S. aureus</i>	Total no. of MRSA	Percentage
Pus	36	8	22.2
Wound swabs	84	20	23.8
Aspirates	18	6	33.3
Sputum	15	2	13.3
Ear swabs	13	1	7.7
Total	166	37	22.3