LETTERS TO THE EDITOR

Childhood burn injury and suffering of affected families

Burns are one of the most physically and psychologically devastating forms of injury in children. They are also one of the most common household injuries and thus an important cause of mortality and morbidity[1].

Globally, burns ranked among the 15 leading causes of death and burden of disease among children in 2002. The death from burn injuries in WHO's South East Asian Regions accounts for more than half of the global burden of fire related burn[2,3].

In Bangladesh, burn injuries are the fifth leading cause of child injury and second commonest cause of permanent disability from injury in children. Each day, about 474 children experience significant burn[4, 5].

Socio-economic, cultural and demographic factors play a significant role as a cause of burn injuries among children. Whenever a child in a family gets burnt, the whole family suffers. On the side, there is loss of working hours of the attending parents and the high cost of burn treatment; on the other side, there is burn-related physical stress and post-traumatic stress disorders in children[6].

To develop effective prevention programs, identifications of the epidemiological factors of childhood burn injury may provide useful guidance for implementation of preventive measures. Therefore, we conducted this study to investigate burn injuries in pediatric patients.

This prospective study was conducted on 100 pediatric (1-15 years) burn patients consecutively admitted to the burn unit of Dhaka Medical College Hospital between January to June, 2005. The parents of the patients were interviewed using a pre-tested questionnaire. All the cases were followed up twice weekly until discharge.

In the studied patients, burn injury was observed in highest prevalence in the age group of 1-5 years. In 76% of cases of flame burn, female children in the age group of 6-10 years were found to be the commonest (56%) victims.

The mean (±SD) monthly income of the affected families was Tk. 3,260 (±3,761), whereas the mean treatment cost was Tk. 15,227 (±10,881). Majority (84%) of the parents had to collect money either by selling personal goods/lands or by burrowing from others.

Table I: Distribution of burns by age, gender, etiology and residence (n=100)

Parameters	Number
Sex	
Males	38
Females	62
Age range (years)	
1-5	44
6-10	36
11-15	20
Residential status of the affected children	
Village	80
Urban and peri-urban area	20
Etiology of burn	
Flame	68
Electrical	11
Ash	9
Hot liquid (scalding)	8
Acid	2
Hot object	2

The mean (±SD) hospital stay was 34 days (±14.81). Among the enrolled patients, two patients died. Among the survivors, all had complications like scar, postburn contracture and disfigurement of cosmetic area. Five out of 11 cases of electric burn needed amputation of the affected limb.

Burn is an important preventable cause of child injury. Like our study, female preponderance in childhood burn was also observed in several other studies from within[5,7] and outside Bangladesh [8,9,10].

In Bangladesh, poor rural families are seen to bear the major burden of pediatric burn injury. Even after spending the last coin and valuable man-hour, the parents continue to suffer with the affected children; as burn leaves behind the physical stigma of its bite.

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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, Quamruzzaman 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 defect[1]. Vaginal agenesis is estimated to occur in 1 in 4,000-5,000 live female births[2]. These patients are usually managed by different surgical procedure but the long-term outcome is controversial. Among various methods McIndoe technique has remained most popular[3], 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 high[4]. Vecchiettis laparoscopic procedure is complicated and associated with discomfort[5]. Sigmoid neovagioplasty offers some advantages as the gut is distensible and self-lubricating but procedure is complicated[6]. 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.

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