#### Editorial

# Fate of Anorectal Malformations-Wide Gap in Developed Vs Developing Nations

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## **Editorial**

The anorectal malformations (ARM) are gross congenital malformations which can be detected at birth by general physical examination of newborn. It is characterized by absence of anal opening at the normal site. It accounts for one of the commonest congenital anomalies with an incidence of 1 in 2500 to 5000 live births. Nature has decided to provide drainage of bowel (meconium) in such malformations via an abnormally placed (anteriorly) opening in perineum (Low ARM) or via genito-urinary route as in high ARM. Very rarely, ARM may be without fistula as usually in associated Down syndrome. High ARM are usually picked up at birth or soon after sometime because of associated abdomen distension but low ARM are at high risk of getting missed in newborn period or even upto infancy.

The aim of the corrective surgery is to reposition the anus at normal location within the muscle complex. Posterior sagittal anorectoplasty (PSARP) as described by Pena and de Vries in 1980 has been the golden standard for management of ARM. PSARP has traditionally been done as a staged procedure with neonatal colostomy, definitive surgery at a later date followed by colostomy closure. Few poor prognostic factors worth mention are abnormal/deficient sacrum, deficient pelvic innervation, and poor muscle complex and motility disorders.

Freeman et al. in 1980 showed that evoked cortical responses for anal sensation were not present at birth but showed maturation in first 3 to 4 months of life [1]. They argued that the definitive pull through procedures should be completed by 3-4 months of age to achieve best functional results. Western literature reports of completion of all 3 stages in first 6 months of life. But when it comes to developing nations like India, many low ARM are missed at initial examinations and various colorectal issues keep surging. Even high ARM with neonatal colostomies is lost to follow up.

Various socio-economic and medical issues may play a role like long distance for medical assistance, poverty, time constraints, loss of daily wages, long waiting list at various centers, anesthesia fitness issues, anemia, and work up time or negligent attitude of society especially for girl child etc. Many of them would have succumbed to morbidities of stoma especially stomal diarrhea accounting for hidden mortality in ARM. Even if PSARP has been timely done, patient forgets/waits for stoma reversal for years together. When there is no stimulation of neoanus with fecal matter, continence is bound to hamper. In developing nations, compliance is also an issue. It is difficult to convince parents for 3 timely surgeries/general anesthesias. We at our center strive for neonatal definitive surgery (PSARP/anoplasty/pull through) for all ARM cases. Most of high ARM is accessible by PSARP and low ARM undergoes anoplasty (cut-back/Y-V). In case congenital pouch colon has been missed on roentgenogram and is an inadvertent finding on table, we put an intercostal drainage (ICD) tube through muscle complex, divide the fistula from above (abdomen) and do pull through on ICD post pouchorraphy. We understand that the neonatal definitive surgery need anesthesia expertise and sometimes ICU support, which may not be available at all centers. In last decade, few other authors have reported PSARP being done in neonatal age as a single stage pull-through with acceptable results.

The human brain has rich possibilities of connection. There are critical periods when adequate stimulation may provide particular types of connections as hypothesized by Freeman et al. We are proponents of primary pull through at the earliest possible or even neonatal PSARP.

### References

[1] Freeman NV, Burge DM, Soar JS, Sedgwick EM. Anal evoked potentials. Eur J of Ped Surg 1980;31:22-30.

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