

## MULTIPLE PATHOLOGIES AND INGUINOSCROTAL HERNIA IN A THREE WEEK OLD NEONATE

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### ABSTRACT

**Background and Objective:** The major symptom of congenital inguinoscrotal hernia is the swelling of the scrotum at birth; in most cases the scrotum bulges as the child cries from birth. The pediatricians usually make the diagnosis during the early post natal evaluation of the child. It is uncommon for the child to present with strangulation at about 3 weeks of age. This neonate developed other pathologies. To highlight the dangers of delayed management of inguinoscrotal hernia in a neonate with multiple pathologies, and discuss the different management possibilities, and then elucidate the effects of socio-cultural believes on our health-seeking behaviour.

**Design and Method:** A 2 weeks old baby boy was brought in at a routine consultation at about 10am for restlessness and episodes of sharp crying since early that morning. Incarcerated left inguinoscrotal hernia was diagnosed. The child was tranquilized hernia reduced and surgery was proposed to the mother. When the child became calm, the mother took him home. The child was referred from another clinic 8 days later for irreducible inguinoscrotal hernia. This time his mother accepted and surgery was done. In addition, the child was also diagnosed of congenital, bilateral cataracts and was programmed for surgery by the ophthalmologists.

**Results:** Surgery was then done in emergency and the gangrenous loop of the intestine was resected and anastomosis done. The child recovered and was discharged from the hospital.

**Conclusion:** In some cases, a congenital inguinoscrotal hernia can present with strangulation. These cases require surgery without delay to avoid further complications.

**Keywords:** Pathologies, inguinoscrotal Hernia, Neonate

### INTRODUCTION

The major symptom of congenital inguinoscrotal hernia is the swelling of the scrotum at birth; in most cases the scrotum bulges as the child cries from birth [1, 2]. The pediatricians usually make the diagnosis during the early post natal evaluation of the child. It is uncommon for the child to present with strangulation at about 3 weeks of age [3]. This neonate developed other pathologies. A strangulated hernia is always dangerous at any age if not well managed, and promptly too[1]. A strangulated inguino-scrotal Hernia in a 3-week old baby has associated additional risk factors, considering the fragility

of the patients and the structures involved, especially the spermatic cord, testes and the intestinal loop [4, 5].

Delay in its management creates potentials for serious complications and increases its morbidity and mortality [5].

### CASE REPORT

A 2-week old baby boy weighing 4.2kg was presented at a routine consultation for restlessness, agitation and persistent crying for the past 4hours. The symptoms became more intensified during the past hour, raising the mother's anxiety to suspect that the child had a

problem. During feeding, she noticed that the baby frowned and “bit” his spoon each time he swallowed. The mother also noticed that the baby cried and flexed his left lower limb when lifted up from his arms, but stopped crying for a while when he was laid down. At one time that she was changing his diaper, she noticed that his left scrotum was slightly bulging. She then decided to take the child to the hospital. It was at this point that we received the child for the first time and diagnosed an incarcerated left inguinoscrotal hernia.

We tranquilized the child with diazepam and reduced the hernia and we noticed he was slightly dehydrated too (about 5%) so we solved this using normal saline IV (because of the incarceration we avoided oral rehydration even though the child could swallow and was not vomiting). Surgery was proposed to repair the hernia to the mother, and after careful counseling, she was left to decide. Later on that day she decided to take the child home, saying that he was already calm, and left the hospital. Before she left however, we advised her to bring the child the next day for re-evaluation. But she never showed up.

Eight days later, the mother noticed the same symptoms as before in her baby and this time, even more severe. The child cried throughout the night, vomited many times, and by morning he was tired, weak with very limited movement of his body parts; the cries of the baby became weaker than usual. He refused to eat and did not stool as usual. In the morning the mother rushed with the child to a pediatric clinic where she was told that the baby had a strangulated left inguinoscrotal hernia, and referred to see a surgeon for surgery in emergency. Meanwhile, the pediatrician phoned to find out if we were available and briefly presented the case, asking us to be ready to receive the baby. On arrival to our hospital, the mother presented the referral note from the pediatrician with the diagnosis. On examination we recognized both the child and his mother. But this time the child was severely dehydrated, motionless and lethargic, alive, managing to cry but very weakly, with wood-hard, distended, non-breathing abdomen, with a very swollen and tensed left scrotum. Extremities were cyanosed and cold.

We picked the right jugular vein in emergency and collected blood sample for basic laboratory investigations, and then put up normal saline to rehydrate him. Oxygen was set up as the theatre was being set. A nasogastric tube was inserted. The laboratory results came out showing 9milligrams/deciliter of hemoglobin. The normal saline was suspended and screened; cross-matched, donor blood was given. The operation was done through an extended left groin incision. The strangulated loop of the descending colon was necrotic, the left spermatic cord was oedematous but viable, so too were the left testes and scrotum. The necrotic loop of the colon was resected and end-to-end anastomosis done. Herniorrhaphy by modified bassini method was also done. In the immediate post operative treatment we put him on morphine, gentamycine and ampicilin combination; Oxygen and Fluids were continued. First day post-op: baby was still alive, breathing better, extremities were no longer cyanotic, the abdomen was still distended but softer, no peristaltic sounds were present, no stool. Second day post-op: in the morning peristaltic sound: ++; in the mid afternoon, the child passed out stool, nasogastric bag was changed. Third day post-op: the nasogastric tube removed, morphine stopped oral feeding resumed. Fourth day post-op: oxygen removed and child breaths normally: he later develops diarrhea. Laboratory evaluation of the stool showed sterile diarrhea. A diagnosis of antibiotic diarrhea was made. The antibiotics were stopped and stool frequency progressively reduced and consistency improved until stool became normal 2 days later. On the 8<sup>th</sup> post-op day, clinical blindness was diagnosed on the boy. An ophthalmologist was called in who confirmed it and diagnosed congenital bilateral cataract. The boy has been programmed for surgery by the ophthalmologist. The baby progressively improved and was discharged on the 12<sup>th</sup> post-op day. The surgical wound healed with first intention.

### Comments

This baby has had a short life filled with illnesses. He is his mother’s second child. His mother had a positive serology for HIV that was discovered during the routine antenatal clinic evaluation. She got so depressed that she attempted suicide thrice during the pregnancy.

She opted for a caesarean section to deliver the baby, hoping this would minimize chances of maternal viral transmission to the baby. She took the routine antiretroviral drugs given pre-, per- and post-partum to the mother; the baby also receive the required prophylactic antiretrovirals to minimize transmission of maternal virus to fetus, but the child tested positive for HIV after delivery. At 10 days old, the child developed fever that was diagnosed as severe malaria and treated with quinine in the paediatric unit. After the first incarceration episode when she was advised on surgery the mother consulted a combination of different traditional healers and pastors. One traditional healer gave the child some herbs to drink, and some too for his mother to apply on his groin and abdomen to “send back” the hernia (*montoli* in traditional healers’ language). The pastors conducted different prayers and received offerings, also to send back the hernia. These did not work out as expected however, and the hernia got strangulated.

## DISCUSSIONS

The HIV status for him and his mother, severe malaria at 10 days old, bilateral cataract. The case of this neonate brings to light clinical complexities in a child whose family history is loaded with social complexities. A strangulated hernia is an emergency. When the patient is lucky that it is reduced, surgical repair should be done as soon as possible, before the next strangulation. The social complexities surrounding the baby and of which he was just a victim somehow might have contributed to derail his mother<sup>2</sup>. In her depressed and confused state caused by her HIV status, the baby’s HIV status, his frequent early illnesses as outlined above, she was driven to believe that there was an unclean spiritual hand in her bad luck, hence the belief that these problems could be handled by spiritualist and herbalist, despite medical advice [2]. Some technical possibilities in this case are also scientifically debatable. Firstly, the baby’s HIV status may be due to is it his own positivity or it is due to the transplacental transmission of maternal antibodies. The child is still on follow up so we would clarify this when the child > 9months old [6]. Secondly the surgical approach to the inguinoscrotal hernia at this age literature states that at this age they seldom strangulate but often

become obstructed [5]. This, as it is explained anatomically, is because the neck of the hernia canal is wide and the canal itself is short [1, 5], but this neonate presented us with the hernia that got strangulated. Thirdly, comes the operative approach. It is stated in literature that surgery should be avoided before the child reaches 3 months old [1, 5]. Most advice operative repair from 3 to 6 months of age, but we were faced with a hernia that got strangulated at 3 weeks of age. Obviously no surgeon would give himself a choice between surgery and conservation management. Our team decided to operate. Fourthly, comes the types of operations for both the hernia and intestinal obstruction from the strangulation. For the hernia, literature advices simple herniotomy at this age<sup>1-5</sup>: simply dissect the hernia sac, ligate and resect<sup>1-5</sup>. In this case we found such a large ring that, judging from our previous experiences, simple herniotomy would have increased the risk of recurrence. So we had to do hermiorrhaphy by modified Bassini repair method, using vicryl 2/0 suture, without mobilizing the abdominal muscles and trying to keep intact what would be the conjoint tendon in future. For the strangulated gangrenous loop of the descending colon, surgeons generally agree on the first phases of management: identification, isolation and resection of the gangrenous loop<sup>1-5</sup>. But differences come in the final approach. Some authors advice an ostomy of some kind in the initial operation, with another surgery and end-to-end anastomosis at a later date<sup>5</sup>. Some also recommend anastomosis with a proximal colostomy at the initial operation, with another operation planned later to close the colostomy<sup>1-5</sup>. This case has enable us to gather knowledge useful in complex situation in neonates. This Knowledge also has to be adapted to the patient, circumstances and personal experience. In this case we did resection and end-to-end anastomosis in the initial operation, and it came out to be successful.

## CONCLUSION

Although strangulated inguinoscrotal hernias are seldom in neonates, they nonetheless do occur, and clinicians should bear this in mind. When they occur, surgery should be performed early enough before other complications set in. The type of surgery should take into consideration current knowledge and practice, but should also

be done in the light of the patient, circumstances and personal experiences of the surgical team. In addition, despite what the mother and the neonate went through, care should be taken when socio-cultural practices may contradict scientific knowledge.

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