Tragic Outcome of Peanut Allergy

Peanut and tree nut allergies are responsible for 80% out of 100-200 lethal cases of food allergy [1]. Children with food allergies have a lower quality of life caused by fear of a possible anaphylaxis [2,3].

We report a case of 9-year-old girl with positive family history of atopic diseases. Her first acute allergic reaction with dyspnea and vomiting occurred at the age of two years. At that time, she was hospitalized, treated with intravenous steroids, and was diagnosed with allergies to cow's milk, chicken egg and peanuts. Due to food allergies and frequent respiratory tract infections, her parents decided not to send her to a kindergarten. When the girl was 5-year-old, allergy tests did not confirm allergies to cow's milk and chicken egg anymore; however, specific IgE against peanuts were still present in high titers. One year later, she started attending an organized pre-school learning. She used to eat home-made meals only. At the age of nine years, she participated in the school camp – her first fully independent trip. She was equipped with an adrenaline auto-injector. The girl was educated and aware of her illness, and she avoided consuming peanuts. Despite that, once at home, she ate three pieces of chocolate labelled with a warning 'may contain peanuts'. After a few minutes, she developed stomach ache and dyspnea. Her father immediately administered her 0.15 mg of adrenaline intramuscularly, but she lost consciousness. Her neighbour, who was a paramedic, administered another dose of 0.15 mg of adrenalin from auto-injector and started resuscitation. The ambulance and emergency helicopter arrived within a few minutes. The child was intubated, chest compressions were carried out, and adrenaline, hydrocortisone and calcium chloride were administered intravenously. The girl regained consciousness for a short period of time. However, while she was being transported to the hospital, she again went into a cardiac arrest and despite 2.5 hour long resuscitation, she died. The postmortem report suggested anaphylaxis as the cause of her death.

Despite continuous improvement in diagnostic methods, the most important factors for patients with food allergies are more legible information on food packaging, strict diet and proximity of professional medical help. It is essential to educate patients about their allergy and equip them with adrenaline auto-injector. 3E (education, elimination, epinephrine) should be the first line of defense from a tragic results of anaphylaxis.

Contributors: Both authors were involved in acquisition of information, drafting the manuscript, and its final approval.
Funding: None; *Competing interest*: None stated.

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REFERENCES

1. Wang J, Sampson HA. Food allergy: Recent advances in pathophysiology and treatment. Allergy Asthma Immunol Res. 2009;1:19-29.
2. Marklund B, Staffan A, Nordström G. Health-related quality of life in food hypersensitive schoolchildren and their families: Parents' perceptions. Health Qual Life Out. 2006;4:48.
3. Sicherer SH, Noone SA, Munoz-Furlong A. The impact of childhood food allergy on quality of life. Ann Allergy Asthma Immunol. 2001;87:461-4.

VACTERL Association with Sacrococcygeal Teratoma

VACTERL association refers to the non-random co-occurrence (1 in 10,000 to 1 in 40,000 live-born infants) of vertebral anomalies (V), anal atresia (A), congenital heart defects (C), tracheoesophageal fistula (TE), renal anomalies (R) and limb defects (L) [1,2]. It is typically defined by the presence of at least three of them without clear evidence for an alternate, overlapping diagnosis [1-3]. The occurrence of VACTERL association with sacrococcygeal teratoma (SCT) is extremely rare.

A 2-day-old female neonate presented with a large sacrococcygeal lump with absent normal anal opening (***Fig.* 1**). The patient was in respiratory distress with nasal flaring. Examination revealed vestibular fistula, fine crepitations with presence of cardiac murmur. Failure to negotiate a red rubber catheter down the esophagus suggested the presence of esophageal atresia. Radiological evaluation confirmed the presence of esophageal

atresia with tracheoesophageal fistula (TEF), increased cardio-thoracic ratio, Altman's type I SCT (***Fig.* 1**), and left multicystic kidney. Thoracotomy with staged repair of Vogt type3b was performed. Postoperatively patient developed sclerema and died. Echocardiography to confirm the presence of cardiac anomalies, and tumor markers for teratoma were not possible due to resource constraints. In addition to SCT, we made a diagnosis of VACTERL association owing to presence of three anomalies in our patient.

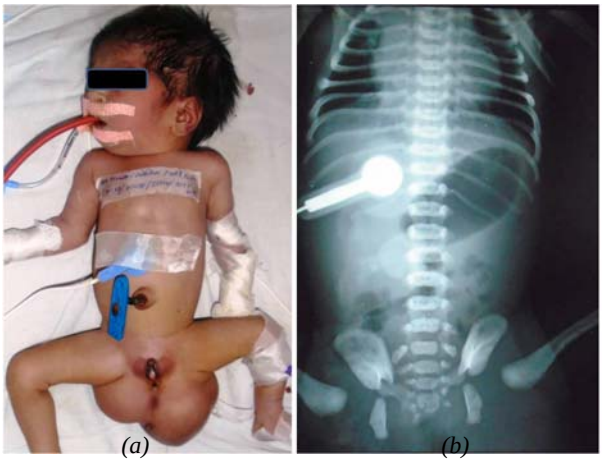

FIG. 1 *(a) Neonate with sacrococcygeal teratoma type 1,small perineum and vestibular fistula, with red rubber catheter not going beyond 10 cms into the esophagus; (b) radiograph showing dilated stomach shadow, soft tissue shadow in the sacrococcygeal region, normal vertebrae and increased cardiothoracic ratio.*

VACTERL association specifically refers to the structural abnormalities derivative of the embryonic mesoderm (disruption in the proliferation, migration and differentiation of mesoderm) [1]. Epiblasts cells migrating from primitive node and proximal part of primitive streak lead to the formation of notochord, paraxial and intermediate plate mesoderm [4]. Failure of some of these epiblasts cells to migrate will lead to remnants at primitive streak which may persist in sacrococcygeal region as a teratoma[4].

We propose that VACTERL association and SCT may be more than a chance association in our patient. Clinicians should have high index of suspicion for VACTERL association in a neonate presenting with sacrococcygeal teratoma and anorectal malformation.

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REFERENCES

1. Solomon BD. VACTERL/VATER Association. Orphanet J Rare Dis. 2011;6:56.
2. Khoury MJ, Cordero JF, Greenberg F, James LM, Erickson JD. A population study of the VACTERL association: Evidence for its etiologic heterogeneity. Pediatrics. 1983;71:815-20.
3. Quan L, Smith DW. The VATER association. Vertebral defects, Anal atresia, T-E fistula with esophageal atresia, Radial and Renal dysplasia: a spectrum of associated defects. J Pediatr. 1973;82:104-7.
4. Sadler TW. Langman's Medical Embryology,10th ed. Philadelphia: Lippincott Williams & Wilkins; 2012.

En-masse Protrusion of Ventriculo-peritoneal Shunt Tube Through the Anus

A 7-month-old boy, with a right-sided Ventriculo-peritoneal (VP) shunt *in-situ* for 2 months, presented with shunt tube protruding through anus for 2 hours. The infant was treated for acute diarrhea till 2 days ago. There were no signs of meningitis or peritonitis. Perineum showed a 'bunch of shunt coils' dripping cerebrospinal fluid (***Fig.* 1**). Abdominal *X*-ray showed point of entry of the shunt tube into the sigmoid colon with no pneumoperitoneum (***Fig* 1**). The shunt was divided through small subcostal incision; cranial end was removed and the peritoneal end was pulled out through anal opening.

Besides infection, malfunction, and CSF loculations, the shunt tube can migrate into any visceral organ [1]. Intestinal perforation caused by shunt procedures is rare, and about 50% occur in infants. Anal protrusion of shunt is an extremely rare complication [1,2].

Often, some surgeons keep sufficient length of shunt tube to accommodate for the linear growth of the baby by coiling the peritoneal end and securing the 'bunch of coils' with an absorbable suture in the supra-hepatic space so that shunt does not spread itself all over the peritoneal cavity between the intestinal loops. This decreases the chances of intestinal perforations and spontaneous knotting. Despite this effective technical