

Euro Cancer 2019 & Data Mining 2019 & Arthroplasty 2019: Case Report: A 6-year-old boy with extensive crush injury of the lower extremities- Ativor V, Ludwig Maximilian University of Munich, Germany

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Crush Syndrome is that the systemic manifestation of muscle fiber damage resulting from pressure or crushing. Initially described by Bywaters and Beall in 1941 in a patient who initially seemed to be unharmed but subsequently died of kidney failure. Crush Injury: Compression of extremities or other parts of the body that causes muscle swelling and/or neurological disturbances. Crush Syndrome: Crush injury with systemic manifestations. Systemic manifestations are caused by a traumatic rhabdomyolysis thanks to muscle reperfusion injury when compressive forces on the tissues are released. This can cause local tissue injury, organ dysfunction, and metabolic abnormalities, including acidosis, hyperkalemia, and hypocalcemia.

A 6-year-old boy presented to the Accident & Emergency Department of Komfo Anokye Teaching Hospital (KATH) Kumasi, Ghana with hemorrhagic shock and severe crush injury of both lower extremities following a roll-over accident by a automobile while crossing a highway. Initial therapy included aggressive resuscitation with IV fluids and hemotransfusion. He was quickly delivered to the OR for assessment of injury extent: 1.) Severe crush injury of both lower limbs with gross soft tissue injuries beyond limb salvage. 2) Huge degloving injury extending from the lower half the rear to the perineum, sparing skin of scrotum and penis. Disarticulation at the left hip level of the left lower limb and a trans-femur amputation of the proper lower limb were performed also as a debridement of the degloving injury of the rear. The patient was treated within the Clinical Decision Unit for 16 days thanks to unavailable vacancy within the pediatric ICU (PICU). During

this point, he developed sepsis, wound infections, and an infection of the anal region, that surgical re-debridement and colostomy were done along side pediatric surgeons. He was then transferred to the PICU for acute wound care, management of colostomy, control of E. coli sepsis and anemia. Nine weeks after his initial presentation, split-thickness skin grafting (STSG) using skin from his arms was performed together of trauma and plastics surgeons of KATH. First review of STSG post-surgery showed an honest response and no signs of graft rejection or infection. 14 days later he showed 85% STSG take, all the donor sites of the skin including both arms and both fore arms showed healing without complications. A colostomy reversal was performed about four months after the initial procedure. Thanks to multiple wounds round the perineum and therefore the anal region, he developed anal canal stenosis. Repetitive dilation treatments over the course of three weeks were performed with sufficient results. The patient began to mobilize employing a mini wheel chair and was transferred to the pediatric surgical ward where he integrated well with other children. He remained in good spirits and was discharged 4 months after the initial accident. Long term graft survival will determine management success. the longer term therapy strategy will include rehabilitation to make sure mobility under the present circumstances and therefore the provision of an adequate wheel chair, maybe even a sort of sustainable prosthesis. The patient and his family will still face several socio-economic and cultural challenges (family burden, cost of medical equipment and drugs, hospital bills, rehabilitation, social integration). The survival of this child is that the results of effective interdisciplinary teamwork. Furthermore, it demonstrates success and challenges of trauma care under the socio-economic conditions of a lower middle-income country.