



Consequences and treatment aspects of trauma in female patients

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In surgery-specific clinical aspects of treating female patients such as trauma during pregnancy, epilepsy-related injuries, osteoporosis or diagnosis of acute appendicitis during pregnancy occur. These cases comprise a large number of injuries requiring hospitalization. The purpose of this issue was to point out clinical challenges to improve the treatment of female patients.

In his review, Petrone [1] presents a critical literature overview showing the most common causes of trauma during pregnancy. Also factors such as morbidity, mortality and the impact upon perinatal outcomes associated with trauma are shown. 95,949 patients were included in this review presenting the significant public health burden and the clinical challenge for the trauma surgeon taking care of the pregnant woman and her unborn child. All professionals treating trauma patients should be aware of the anatomic and physiologic changes occurring in pregnant women.

Verboket [2] demonstrates the prevalence and clinical nature of epilepsy-related injuries in a cohort of women with epilepsy. Possible determinants including osteoporosis were identified showing that relevant complications for women with epilepsy are associated with a lower quality of life and anxiety. The improvement of anticonvulsive treatment and the adequate therapy for osteoporosis or osteomalacia may seem to be an important factor to reduce epilepsy-related injuries and the associated burden.

Al-Thani [3] took a closer look at trauma of pregnant women. The average incidence rate of traumatic injuries in their study was 250 per 1000 women of childbearing age. Mostly traffic-related crashes followed by falls occurred in pregnant women, thus making it a complex condition for trauma surgeons and obstetricians. To save lives of both the

mother and fetus, appropriate management protocols and multidisciplinary teams are needed.

After pelvic trauma in women, the injury of the uterus, ovaries or fallopian tubes is possible. Grigorian [4] retrospectively analyzed 2,040,235 female patients of which 1938 suffered a pelvic gynecologic trauma showing a high risk for hysterectomy in patients with ISS ≥ 25 and a high risk for salpingectomy or oophorectomy after gunshot injuries. In this group of patients, an operative treatment was shown to be associated with a lower risk of mortality making a close collaboration with the obstetricians/gynecologists very important.

To find out if pregnancy has an influence on the diagnosis of acute appendicitis was the goal of Tatli [5]. In their study, they were able to demonstrate that pregnancy does not have a negative effect on the efficacy of Alvarado Score. That makes it even in pregnancy an easy, non-invasive auxiliary diagnostic tool with sensitivity and specificity rates of 79 and 80%.

This focus on consequences and treatment aspects of trauma in female patients is a compilation of a review and four original articles, which highlight different aspects of the treatment of female patients.

They underline that especially the pregnant patient needs particular attention in many aspects. Often multidisciplinary teams of trauma surgeons and obstetricians/gynecologists are needed to provide the best patient care.

As guest editors of this issue, we hope you enjoy reading the selection of topics around the aspects of treating women; further research is certainly needed to continuously improve patient's and unborn baby's safety and outcome.

Compliance with ethical standards

Conflict of interest Caroline Seebach and René Verboket declare that they have no conflict of interest.

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