A research was conducted between July 2016 and June 2018 in Belo Horizonte, Minas Gerais, Brazil. Out of 33 patients, 12 (36.4%) patients experienced wound complications after ventricular shunt operations between 2015/Jul and 2018/Jun from hospitals, including the Hospital Universitário Ciências Médicas (Jan/2017 to Jul/2019): endemic curve.

**Disclosures.** All Authors: No reported disclosures

**892. Meningitis after Ventricular Shunt Operations: Multicenter Study to Identify Etiology, Incidence and Risk Factors**

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**Session:** P-42. HAI: Surgical Site Infections

**Background.** A ventriculoperitoneal shunt is the main treatment for communicating hydrocephalus. Surgical site infection associated with the shunt device is the most common complication and an expressive cause of morbidity and mortality of the treatment.

The objective of our study is to answer three questions: a)What is the risk of meningitis after ventricular shunt operations? b) What are the risk factors for meningitis? c) What are the main microorganisms causing meningitis?

**Methods.** A retrospective cohort study assessed meningitis and risk factors in patients undergoing ventricular shunt operations between 2015/Jul and 2018/Jun from 12 hospitals at Belo Horizonte, Brazil. Data were gathered by standardized methods defined by the National Healthcare Safety Network (NHSN)/CDC procedure-associated protocols for routine SSI surveillance. Sample size = 926.

26 variables were evaluated by univariate and multivariate analysis (logistic regression).

**Results.** 71 patients were diagnosed with meningitis which represent a risk of 7.7% (95% CI: 6.1%; 9.6%). From the 26 variables, three were acknowledged as risk factors: age < two years old (OR = 3.20; p < 0.001), prooperative hospital length of stay > four days (OR = 2.02; p = 0.007) and more than one surgical procedure (OR = 3.23; p = 0.043). Patients two or more years old, who had surgery four days after hospital admission, had increased risk of meningitis from 4% to 6% (p = 0.140). If a patient < two years had surgery four days post hospital admission, the risk is increased from 9% to 18% (p = 0.026). 71 meningitis = 45 (63%) the etiologic agent identified; Staphylococcus aureus (33%), Staphylococcus epidermidis (22%), Acinetobacter sp (7%), Enterococcus sp (7%), Pseudomonas sp (7%), and other (18%). Hospital length of stay in non-infected patients (days): mean = 21 (sd = 28), median = 9; hospital stay in infected patients: mean = 34 (sd = 37), median = 27 (p = 0.025). Mortality rate in patients without infection was 10% while hospital death of infected patients was 13% (p=0.54).

**Conclusion.** Two intrinsic risk factors for meningitis post ventricular shunt, age under two years old and multiple surgeries, and one extrinsic risk factor, prooperative length of hospital stay, were identified. Incidence of meningitis post VP shunt decreases with urgent surgical treatment.

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**893. Occurrence’s Prediction of Surgical Site Infection in Limb Amputation Surgery**

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**Session:** P-42. HAI: Surgical Site Infections

**Background.** Hemipelvectomy is associated with a significant risk of wound complications, including infections, bleeding and injuries to nearby neurovascular structures as well as the gastrointestinal and genitourinary tract. This study aimed to determine the patient characteristics and approach to treatment that could affect the occurrence of surgical site infection or wound complications in sarcoma patients undergoing hemipelvectomy.

**Methods.** We conducted a retrospective analysis of 33 adult patients who underwent hemipelvectomy at Moffitt Cancer Center, Tampa, Florida, from 2008 to 2016. We used Chi-square (Exact Fisher) test to investigate the association between wound complication and categorical variables. We used a T-test to evaluate the difference in numerical variables for outcomes.

**Results.** Out of 33 patients, 12 (36.4%) patients experienced wound complications after hemipelvectomy (Table 1). The average age of patients with wound complications was 63.3 ± 15.4 years old, significantly higher than that of patients without wound complications (p=0.004). Without adjustment, the use of computer navigation had a lower wound complication rate (p=0.027). Patients with wound complications had longer hospital length of stay (14.8 ± 7.0 days, p=0.016). Among patients with surgical site infection (Table 2), there were no patients’ characteristics or surgical characteristics associated with this outcome. Five (15%) patients developed surgical site infection and they had longer hospital stay (19.4 ± 8.1 days, p=0.001). The organisms identified from wound cultures include methicillin-resistant Staphylococcus aureus, viridans Streplococcus, Peptostreptococcus asaccharolyticus, Enterobacter cloacae, Pseudomonas aeruginosa, Candida albicans. The organisms in late infections (more than 6 months since surgery), included above organisms plus Stenotrophomonas maltophilia and Achromobacter xylosoxidans.