DEEP NECK INFECTION: REVIEW OF 263 CASES

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Introduction. Deep neck infection (DNI) occurs in the spaces between muscles and organs in the floor of the mouth and neck. In 21st century odontogenic origin is the most common etiology in adult population. Complex anatomy of this region plays a major role in the development of the complications as well as surgical approach.

Aim. to analyse patients’ records from Pauls Stradins Clinical University Hospital, who were hospitalized due to DNI. Reveal any possible association between demographic parameters, etiology, DNI localization, complications, comorbidities, treatment and bacterial culture.

Materials and methods. a retrospective study using 263 patient’s records with DNI who were hospitalized in Pauls Stradins Clinical University Hospital’s department of Otorhinolaryngology and Centre of Dentistry and Facial Surgery in the period from January 1st 2012 to December 31st 2014. The inclusion diagnosis was phlegmon and/or abscess of the deep spaces in adult patients. Statistical analysis was conducted using SPSS 22.0 software, significance level was set at maximum of 5% (p < 0.05). Descriptive Statistics, Binary Logistic Regression and Mann-Whitney tests were used.

Results. 263 patients were viewed retrospectively – 57% male and 43% female. Median age was 44 years (IQR 29–60), median hospital stay was 7 days (IQR 5–11). Most frequent diagnosis was dental infection 70.6% (n = 139), most frequent DNI was submandibular abscess 36.6% (n = 95) and phlegmon of neck 29.8% (n = 78). 74.9% of patients had only one DNI localization (n = 197). At 11.4% (n = 30) of cases there were complications, the most frequent – airway obstruction 90.0% (n = 27). The most frequently perscribed antibiotic was Metronidazole in 79.5% (n = 209). 93.5% of patients had surgery (n = 246), incision and drainage in 96.3% (n = 237). Reoperation was performed in 19.8% (n = 52); 6.1% of patients were admitted to the ICU (n = 16). One lethal case. In 12.5% there was a postive bacterial culture (n = 33), most frequently found pathogen was Acinetobacter baumanii in 38.2% (n = 13), which indicates intrahospital infection. Metacillin sensitive coagulase negative Staphylococcus was found in 32.4% (n = 11), which also increase a risk of complication development (OR = 7.56, p = 0.002).

Conclusion. DNI tends to affect both genders equally, usually in middle age. The most frequent etiology is dental infection which corresponds to the world data. Despite antibacterial and surgical treatment complications occurs quite often, mostly as airway obstruction. If the DNI has developed, surgical incision and drainage combined with aggressive antibacterial therapy is the treatment of choice.