Should be Peristomal infection after Percutaneous Endoscopic Gastrostomy considered a Healthcare Associated Infection? Role of Antibiotic prophylaxis

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Background

Percutaneous Endoscopic Gastrostomy is a widely used method for insertion of a gastrostomy tube in patients who are unable to eat but have a normally functioning gut.
Peristomal wound infection is the most common complication. Risk factors for local infection are largely unknown. Evidence suggests that antibiotic prophylaxis with glycopeptides and preventive strategies related to infection control may reduce infection rates.

Purpose

To evaluate the incidence rate of peristomal infection and to access the potential patient risk factors following PEG tube placement.

Methods

An observational analytic prospective study was carried out at Garcia de Orta's Hospital between October 2010 and May 2011 and 31 patients were included. A minor adaptation of the Centers for Disease Control (CDC) definitions for superficial surgical site infection was used to detect PEG site infections. Medical records were reviewed for demographic data, use of prophylactic antibiotics (cefazolin), complications and co morbid conditions.The swabs were performed on the 5th and 30th day after the procedure (PEG by pull method). All the cultures isolates from peristomal wound were analysed for the antibiogram using the disc diffusion method. Statistical analysis SPSS 17.

Results

Peristomal infections was identified in 15/31 (48,38%). It was found a global incidence rate (30 days) of 16,12. 1000d-1 and an incidence density of 9,44. Wound isolates included *Pseudomonas aeruginosa* (39,1%) and *Staphylococus aureus* (61%) which 50% were methicillin-resistant (MRSA). *Diabetes mellitus* and obesity were significantly associated with peristomal infection (p<0,05). From patients who have received antibiotic prophylaxis with cefazolin (51,8%), 55,5% developed PEG-site infections.

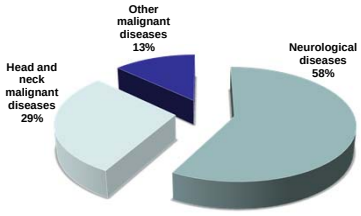

Figure 1. **Underlying indications for PEG insertion**

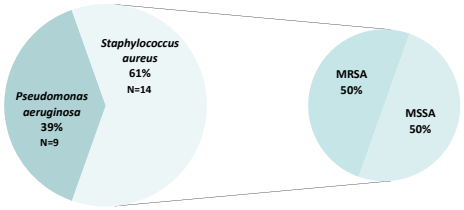

Figure 2. **Microbiological Culture Results**

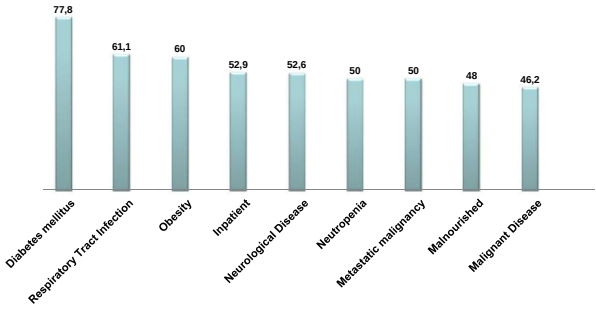

Figure 3. **Incidence Infection Rate (%) by Intrinsic Risk Factor**

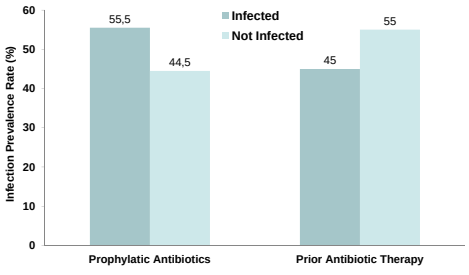

Figure 4. **Prophylatic Antibiotics in PEG Infection**

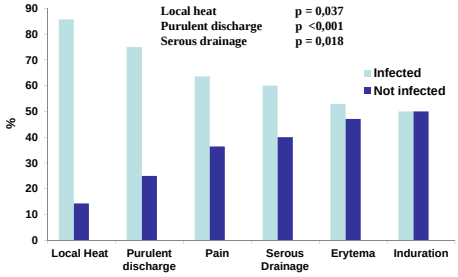

Figure 5. **Wound Phenotipic Characteristics**

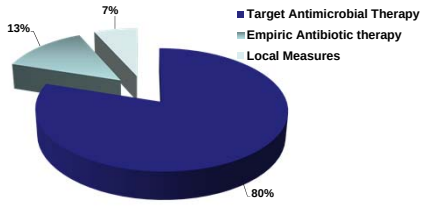

Figure 6. **PEG Infection Treatment**

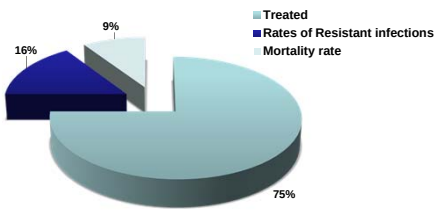

Figure 7. **Results of 1- month follow-up**

Conclusions

Patients with *Diabetes mellitus* and a IMC>30 kg/m² have a higher risk of peristomal wound infections after percutaneous endoscopic gastrostomy.
High incidences of MRSA (30,4%) illustrates the need of a review of the antibiotic prophylaxis protocol but the efforts to reduce MRSA occurrence with infection control measures and an epidemiological surveillance program should remain a priority.

Bibliography

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