(0.4 mg/kg) and butorphanol (0.2 mg/kg), administered intranasally using MAD Nasal™ (Group A: 13 rabbits) or intramuscularly (Group B:13 rabbits).
Induction time, times of loss and reappearance of pedal and palpebral reflexes along with time of head lifting were recorded. Where required, isoflurane was dispensed through a face mask, with manual assisted ventilation in case of superficial breathing or SpO2<95%. At the end of the procedures, atipamezole (1-2 mg/kg) was administered through the same routes in the respective groups.
Results
Statistical analyses were performed using one-way Anova test and chi-squared test (Program R, version 4.1.2), considering a significance level of p<0.05. There were no statistically significant differences for the followings: induction time (p=0.096), times of loss and reappearance of palpebral (p=0.11; p=0.06 respectively) and pedal (p=0.08; p=0.37) reflexes, need of assisted ventilation (higher in Group B) (p= 0.39) and its duration (p=0.29); duration of surgery (p=0.4) and anesthesia (p=0.32).
There were statistically significant differences for the need of supplemental isoflurane (higher in Group A) (p=0.02) and time of head lifting (p=0.02), occurring earlier in Group A (mean: 4 vs 8 minutes after the administration of atipamezole) suggesting a faster onset of the effects of atipamezole when administered by atomization in unconscious patients.
Conclusion
The need of isoflurane and a more efficient spontaneous breathing in Group A suggest a lighter plane of anesthesia compared to Group B, potentially related to a partial loss of the drugs due to a lack of a gold standard in the administration technique. Moreover, part of the dose could have been lost during swallowing or sneezing in some rabbits.
Overall, our data showed no differences between the routes of administration in the induction times. Intranasal atomization was therefore a good alternative for administering sedative and anesthetic drugs, less invasive than traditional methods.

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A10.

Impact of a dexmedetomidine intravenous infusion in septic dogs: preliminary study

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Background: Sepsis represents an increasing health emergency both in human and veterinary medicine Dexmedetomidine is an alpha-2 agonist drug with sedative and analgesic properties recently used critically ill patient in human ICU [1]. The purpose of this work was to evaluate hemodynamics effects of a continuous infusion of dexmedetomidine in septic dogs.
Materials and methods: We enrolled 16 septic dogs arrived at the Intensive Care Unit (ICU) of the Veterinary Teaching Hospital "Mario Modenato" of the University of Pisa that underwent emergency surgery in a prospective blind randomized clinical trial (auth. n.24/2020). A clinical evaluation and blood tests (haematological and biochemical, blood gas analysis) were performed at arrival and 24, 48 and 72 hours after surgery. A qSOFA and SOFA score were calculated for all dogs upon arrival at ICU and every day during hospitalization. Patient progress, possible discharge and the 28-day survival rate were also recorded. Dogs were randomly divided into two groups: dexmedetomidine (DEX) group that received a constant rate infusion of dexmedetomidine at 1mcg/kg/h and the control group (NaCl) that received an equivalent infusion volume of NaCl. All patients were premedicated with fentanyl 5mcg / kg IV, induced with propofol and maintained with sevoflurane. The infusion (DEX or NaCl) started 10 minutes before induction of anaesthesia. Analgesia was provided by a variable fentanyl infusion (3-20 mcg/kg /h). In case of hypovolemia, Ringer lactate 10 mL/kg boluses were administered in order to restore normovolaemia; lactate, blood pressure and heart rate were monitored for the response. In case of hypotension due to vasodilation (MAP <60 mmHg), norepinephrine was administered starting from 0.05 mcg/kg/min with an increase of 0.05 mcg/kg/min until normotension was restored. In case of failure to restore normotension within 30 minutes of the initial infusion, adrenaline boluses were considered. The anaesthetist in charge of the case was not aware of the protocol administered. During the surgery, heart rate (HR), blood pressure, capillary refill time (CRT), arrhythmias, EtCO2, ET'Sevo and spirometry were recorded every 5 minutes.
At the end of the anaesthesia, the infusion of dexmedetomidine or NaCl continued in the intensive care unit (ICU) for a total of 24 hours.
Results: The number of deceased patients was statistically lower (p = 0.0034) in the DEX group (1/10) in comparison to the NaCl group (5/6). The number of patients that required norepinephrine administration was not statistically different between the two groups (p = 0.056) but the NaClgroup received a significantly higher dose (0.78 ± 0.25) than the DEX group (0.16 ± 0.26) (p = 0.007). Adrenaline necessity was significantly higher (p = 0.0004) in the NaCl group.
Conclusions and clinical relevance: From this preliminary results emerged that an infusion of dexmedetomidine at a dosage of 1 mcg/kg/h can contribute to increase cardiovascular stability, decrease the demand for intraoperative vasopressors and the need for emergency drugs such as adrenaline. Further studies with a larger number of cases are needed in order to confirm these results.

Anestesia generale e medicina perioperatoria

A11.

The preliminary data of a prospective analysis about onset of postoperative acute kidney injury (AKI) after elective and urgent surgery

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Background
AKI is a common complication after surgery and is associated with an increased risk of morbidity, mortality and development of chronic renal dysfunction. The aim of this prospective study is to determine the incidence of postoperative AKI after intermediate and high non-cardiac surgery, to recognize clinical impact of this problem in our University Hospital. to evaluate the 30-day mortality and a worsening of the quality of life through the "Duke Activity Status Index" (DASI).
Materials and Methods
The study included patients undergoing elective and urgent intermediate and high non-cardiac surgery procedures between June- October 2019 at University Hospital Ospedale di Circolo ASST-Settelaghi Varese. We define postoperative AKI according to KDIGO criteria. Our primary endpoint is the incidence of postoperative AKI onset. Additionally, we have analysed the AKI stage, the principal risk factors, 30-day mortality and the quality of life modification during immediate postoperative period according to the DASI (Duke Activity Status Index) .
Results
We enrol 210 patients. **Table 1** shows demographical and clinical characteristics of the patients. 77 patients (36%) develop AKI