Serum IL-6, 10 and substance p concentrations of patients administered distinct anaesthetic techniques in breast cancer surgery

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Introduction

Breast cancer is one of the main causes of death between women. Even when surgery is supposed to be curative, patients can suffer from metastatic disease. A number of perioperative factors including anaesthetic technique might influence whether minimal residual micrometastases are eliminated or became full-blown metastatic disease. Apoptosis of tumoral cells is influenced by multiple factors, including immune cytokine signalling. Many of these aspects can be modified by anaesthesia.

Mat & Methods

20 women with diagnosis of breast cancer were randomized to receive either pectoral block with intravenous propofol (PEC) anaesthesia or general standard with sevoflurane and opioids anaesthesia (GENERAL). We collected 20 ml venous blood before anaesthetic induction, 1 h after surgery at the recovery room and 24h after surgery. Blood samples were centrifuged to obtain serum. We assessed the concentration of IL-6, IL-10 and substance P by using commercially available ELISA test, to determine if anaesthesia can affect cytokine levels.

Results

Figures show levels of IL-6, IL-10 and substance P in both types of anaesthesia.

Conclusions

We didn't find any association between anaesthesia and levels of il-6, il-10 or substance P ($p > 0.05$), showing that general anaesthesia with sevoflurane and opioids or regional one with pectoral block and propofol don't have any influence on concentrations of cytokines at serum. Further studies are needed to determine if levels of cytokines at serum are essential to develop metastatic disease

References

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