

## A001–A193

## Sepsis, Infection, Immunity\_2 A001

**The dose related effect of systemic antibiotics in prevention of postoperative adhesion formation in experimental animals**Abbas Mohamed<sup>1</sup>, Nafeh Ayman<sup>2</sup>, Elsebae Magdy M A<sup>3</sup> and Farouk Youssef<sup>4</sup><sup>1</sup>Department of General Surgery-Theodor Bilharz Research Institute, Cairo, Egypt, <sup>2</sup>Department of General Surgery-Theodor Bilharz Research Institute, <sup>3</sup>Department of General Surgery -Theodor Bilharz Research Institute, <sup>4</sup>Department of General Surgery-Theodor Bilharz Research Institute (magdyelsebae@hotmail.com)

Sixty Wistar-Albino rats weighing 200–250 g were assigned to 2 main groups, of 30 rats each. Animals in the first main group (GI,  $n = 30$ ) were injected intramuscularly with 1 ml saline, half an hour preoperatively (the main control group). In the second main group (GII,  $n = 30$ ) animals were injected with 50 mg/kg cefepime HC (Maxipime, BM, Egypt) and 7.5 mg/kg metronidazole (Flagyl, Aventis, Egypt) in a volume of 1/2 ml for each (The main antibiotic group). After a midline laparotomy was performed, abdominal adhesions were induced in all animals. After operation, animals in the main control group were submitted according to the numbers of postoperative intramuscular saline injections into 2 subgroups; GIa ( $n = 15$ ) in which animals were injected every 8 hours for 2 doses and GIb ( $n = 15$ ) where animals were injected every 2 hours for 5 days. Similarly, the main antibiotic group was subdivided into GIIa ( $n = 15$ ) and GIIb ( $n = 15$ ). On the 14th day, the rats were killed and the adhesion score was determined.

**Results:** Short course of antibiotic significantly decreased the extent of postoperative peritoneal adhesions ( $P < 0.05$ ), while the severity of adhesions did not show significant changes. The 5 day course of antibiotics revealed significant reduction in both the extent ( $P < 0.001$ ) and the severity ( $P < 0.01$ ) of postoperative peritoneal adhesions. To conclude, short course antibiotics, which have been the standard regimen for prophylaxis against surgical infection, did not show significant reduction of postoperative intra-abdominal adhesions in experimental animals. A 5 day course of antibiotics significantly decreased the incidence, extent and severity of postoperative intra-abdominal adhesions. However this 5 day course should not be described routinely in abdominal surgical practice. It may be indicated in prolonged abdominal operations, surgery on the bowels, history of recurrent adhesive intestinal obstruction or relaparotomy operations.

## Cardiovascular, Thoracic\_1 A002

**Concentration and activity of matrix metalloproteinases and tissue inhibitors of metalloproteinases in the wall of abdominal aortic aneurysm at different wall stress**Abdul Rahman M N A<sup>1</sup>, Heng M S T<sup>2</sup>, Fagan M<sup>3</sup>, Greenman J<sup>4</sup>, McCollum P T<sup>5</sup>, Chetter I C<sup>6</sup><sup>1</sup>Academic Vascular Surgical Unit, Hull Royal Infirmary, <sup>2</sup>Academic Vascular Surgical Unit, Hull Royal Infirmary, <sup>3</sup>Medical Engineering Department, University of Hull, <sup>4</sup>Biosciences Department, University of Hull, <sup>5</sup>Academic Vascular Surgical Unit, Hull Royal Infirmary, <sup>6</sup>Academic Vascular Surgical Unit, Hull Royal Infirmary (bishami.abdulrahman@bey.nhs.uk)

**Background:** AAA formation and development occur due to excessive extracellular matrix degradation which is closely regulated by matrix metalloproteinases (MMPs) and their inhibitors (TIMPs). It is suggested that variation in wall stresses may be influential in this regulation. We aimed to assess the impact of high and low wall stress on MMPs and TIMPs and to compare this with controls.

**Method:** We recruited 22 patients undergoing elective AAA repair and 8 patients undergoing (CABG) as controls. A 3D CT reconstruction of AAA was performed and analysed using FEA for wall stress calculation, where samples were taken. Ascending thoracic aorta samples obtained during CABG were used as controls. All samples were snap frozen and analysed for MMP 2, 8 and 9 and TIMP 1 and 2 using ELISA. Statistical analysis was performed using SPSS v14.

**Results:** All results are in median and IQ range High wall stress Low wall stress Control MMP 8 active 5.8 (2.6–9.9) 6.3 (3.8–10.8) 3.5 (2.6–5.0) MMP 8 total 14.2 (8.9–43.6)\* 13.3 (9.2–31.0)\* 6.3 (3.2–13.4) MMP 9 active 0.4 (0.29–1.39)\* 0.6 (0.29–0.86)\* 14.8 (7.2–18.1) MMP 9 total 8.1 (3.6–16.1)\* 8.3 (5.0–11.6)\* 25 (19.0–61.0) TIMP 1 296 (164–522)\* 176 (82–321) 130 (83–221) TIMP 2 25 (11–45)\* 18 (10–33)\* 174 (134–232)\* =  $p < 0.05$  compare to control.

**Conclusion:** Concentration and activity of MMPs and TIMPs in the wall of AAA may be influenced by variation in wall stress.

## Oncology\_2 A003

**Androgen receptors and reaction for hormone therapy in lymph node-positive and lymph node-negative women with breast cancer.**Agrawal Anil Kumar<sup>1</sup>, Zukrowski Piotr<sup>2</sup>, Grzebień Zigmunt<sup>3</sup>, Jelen Michał<sup>4</sup>, Słonina Joanna<sup>5</sup><sup>1</sup>2nd Department of General and Oncological Surgery Wrocław Medical University, Poland, <sup>2</sup>2nd Department of General and Oncological Surgery Wrocław Medical University, Poland, <sup>3</sup>2nd Department of General and Oncological Surgery Wrocław Medical University, Poland, <sup>4</sup>Department of Pathology Wrocław Medical University, Poland, <sup>5</sup>Department of Radiology Wrocław Medical University, Poland (zubez@gazeta.pl)

**Introduction:** Hormone therapy in women with locoregional breast cancer improve prognosis when estrogen receptors or/and progesterone receptors are positive. The role of the androgen receptors (AR), that are also one of the family steroid receptors, is discussed. It is important because of 10% women have only androgen receptors on cancer cells. So the question is: should they get hormone therapy?

**Purpose of the study:** We'd like to find any correlations between AR, metastases to the regional lymph node and with answer for hormone therapy (HT) in women with breast cancer.

**Material and methods:** 723 women with locoregional breast cancer operated in 2nd Department of General Surgery Wrocław Medical University in period 2000–2002. All women were divided in 8 groups: –AR+/LN+/HT+, –AR+/LN+/HT–, –AR+/LN–/HT+, –AR+/LN–/HT–, –AR–/LN+/HT+, –AR–/LN+/HT–, –AR–/LN–/HT+, –AR–/LN–/HT–. We analyzed the patient documentation in pre- and postoperative period. The answer for hormone therapy we evaluated based on 5-year survival after operation and local recurrence.

**Results:** Androgen receptors were positive in 329 women (45,5%). The most of them didn't have metastases to regional lymph node – 170 (51,7%). Whereas many patients AR(+) has breast cancer with N2 or N3. In group with AR(+) and LN(+), that got hormone therapy 5-years survival was 16% higher and the local recurrence was twice less than women with AR(+) and LN(+), that didn't get hormone therapy.

**Conclusions:** Androgen receptors are the most common steroid receptors on breast cancer cells. They were found often in women with stage N2 and N3. The prognosis was better in women with AR(+) and LN(+) who get hormone therapy. We need more study to recommend hormone therapy in every women with AR(+) as routine postoperative treatment in women with breast cancer.

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