Surgery Content Knowledge Test

1. Name the four key problems of surgery before 1840. (4)

***Pain, infection, blood loss, speed***

1. Name the three anaesthetics discovered. For each also give the date they were discovered and the name of the person who discovered or first used it. (3)

***1799 :Laughing Gas (Nitrous Oxide)- Humphrey Davy***

***1846 :Ether- Morton dentist Warren neck tumour Liston leg***

***1847 :Chloroform -Simpson***

1. Describe four problems with ether (4)

***Made patient vomit***

***Irritated lungs of patient –coughing***

***Highly flammable***

***Produced deep sleep-difficult to come out of***

***Difficult to carry around-large heavy bottles***

1. Explain three reasons for opposition to anaesthetics. (3)

***Religious reasons- God created pain, particularly moral effect for childbirth***

***Fear of new things- distrusted chloroform, as it was unfamiliar.***

***Dangers- a number of patients died with chloroform use, particularly healthy, fit young adults-Hannah Greener 14 yrs old.***

1. How did Queen Victoria and John Snow each increase acceptance of chloroform? (2)

***Snow 1848 developed an inhaler which regulated dosage, reducing dangers***

***Victoria used it for the birth of her 8th child 1853***

1. What happened to the death rate after the development anaesthetics? Explain why. (2)

 ***It went up. With the patient unconscious, doctors could spend longer and attempt more complex surgery. Without knowing about germs, more patients died of infection (The Black Period of Surgery 1847-1867.***

1. What did Semmelweiss notice about the pattern of deaths among children in childbirth? What was his solution? Why was it not generally accepted? (3)

***Higher rate of deaths for those whose babies were delivered by medical students, than by midwives. Said hands should be washed in chlorinated water. He couldn’t explain why and his fanaticism and aggression made people think he was mad.***

1. Name the nurse who improved cleanliness in hospitals, despite not knowing about germs (1)

***Florence Nightingale***

1. Name three people/things which inspired Joseph Lister to develop a method of fighting infection.(3)

***His father developed an improved microscope***

***He had read Louis Pasteur’s Germ Theory***

***Carlisle sewage works who used carbolic acid to treat the sewage***

1. Apart from inventing the use of Carbolic Spray to prevent infection, what other contribution to improving surgery did Lister make? (1)

***Catgut used as sutures (stitches) instead of silk.***

1. Explain three reasons for opposition to Lister’s spray. (3)

***Unpleasant and difficult to use-caused cracked hands of surgeons & slowed down process***

***Equipment was heavy and expensive***

***Some doctors didn’t accept the idea of germs (microbes) at first***

***Doctors who copied Lister’s methods didn’t get as good results as he claimed***

***Lister seemed pompous and arrogant***

***Lister kept changing his methods, which made him seem unsure about his ideas***

1. Which company helped Halstead produce rubber gloves for his love? (1)

***Goodyear***

1. Why were blood transfusions banned in the 18th century? (1)

***Because some people died, and they didn’t know why***

1. Who discovered blood types and when? (2)

***Karl Landsteiner 1901 A, B, O***

1. Who performed the first blood transfusion using blood types, when and what was the main difficulty with blood transfusions at this point? (3)

***Reuben Ottenberg, 1907, had to have the donor there (direct transfusion)***

1. Which event led to a big drive to find a way to enable indirect transfusions? (1)

***World War One***

1. Who found this solution, when and what was it that they added to blood to stop it clotting? (3)

***Lewisohn 1915 Sodium Citrate / Rous and Turner 1916, citrate glucose solution***

1. When and where was the first blood bank? (2)

***1917 Battle of Cambrai***

1. Name the new machine, developed in WW1, to help identify shrapnel and bullets inside bodies at the front. (1)

***Mobile X-Ray machine***

1. What emergency technique for dealing with infection was developed in WWI? (1)

***Cutting out the infected tissue and pouring on a saline solution***

1. Which new development did Harold Gilles pioneer during WWI?(1)

***Skin grafting-plastic surgery***

1. When was the hypodermic needle developed and by whom? (2)

***1853 Alexander Wood***

1. Whose germ theory underpinned the work on antiseptics? (1)

***Louis Pasteur***