

Dr. Eastwood, a Pain specialist from the Wirral, gave a talk about the history of painkillers.

He began by saying that although we are 3 months into the twenty-first century, there are no new primary analgesics - those we use are still based on the willow and the poppy.

Opium is the oldest painkiller. Originally it was used in a religious context.

As long ago as 900 B.C., Homer wrote of opium in the Iliad, describing it as the 'bringer of sleep and forgetfulness'. The Sumerians described it as the bringer of happiness and joy.

The Hippocratic Corpus, used between 800 and 400 B.C., was a multiherbal source of some 200 forms of pain relief.

In 1591, Alpino wrote a long paper on opium addiction. Later, in 1644, Descartes made a link between pain and brain. Sir Christopher Wren began using intravenous opium in 1665. Ladies in Victorian times often used laudanum for their 'nerves'. By 1917, morphine was produced.

In the meantime, the Reverend E. Stone began using willow bark in 1763. It was not until 1829, however, that Leroux developed salicin and in 1877, commercial salicylic acid was produced. Later, in 1899, Hoffman developed commercial aspirin, which has been produced by Bayer ever since.

Salicylic acid, the active ingredient in aspirin, is most known for its association with willow, but it is also found in other plants such as meadowsweet and wintergreen.

The other common analgesic, paracetamol, was developed in 1893, initially as acetaminopren (it only became paracetamol in 1953 and is known as acetaminophen in USA.)

Nowadays, there is a \$20 billion market in analgesics and \$4billion needed to treat side-effects (statistics from the Daily Telegraph suggest that 2000 deaths per annum are due to aspirin alone!)

Returning to opiates: Henry Knowles Beecher (1904-1976) was the godfather of modern analgesia. In 1946, he wrote about pain in men wounded in battle. He recommended in a paper published in the prestigious journal JAMA, that the optimum dose of morphine should be 10mg, 6 hourly intramuscularly post-op. He set the scene for opiate use since then.

Since the mid-70s, scientists have uncovered information about endogenous (body's own) opiate receptors, and in the 90s, it became possible to clone some of these receptors and genetically engineer mice with or without these receptors in order to study the effects of pain.

Spinal opiates were first used as long ago as 1901 (Katwatal in Japan used intrathecal morphine) but it was not until animal work in the 70s that opiates were first introduced in humans as supplementary to anaesthetics.

In 1979, Wang et al used selective spinal analgesia and Behar et al used epidural morphine. In 1985, combined local anaesthetic and morphine was used by Rucci et al.

In 1986, epidural/spinal clonidine was introduced (by Kalia) and also epidural ketamine, (these last 2 drugs are not opiates)

### THE WAY FORWARD:

There are some 30-40 chemicals in what is known as the 'inflammatory soup' that is triggered by damage. As mentioned before, nerve growth factor (NGF) looks as if it may be a

suitable target, but there are a number of others that need investigating.