





The origin of shockwaves and CellSonic

The first machine to make shockwaves was a German made Dornier lithotripter in the 1980's. Shockwaves are not new. The best example is lightning which we hear as thunder when a very high voltage jumps to earth. Exactly the same principle of electricity overcoming resistance to jump a gap and make a bang is used by CellSonic. The resultant sudden flash of sound is called a shockwave. The Germans first used this term. In English we would have said sonic boom but the term shockwave has stuck in the medical field and this technology became the first means of non-invasive surgery.

Commercially the Dornier machines faced the problem of the cost of the shockwaves. The shockhead where the electricity jumped the gap had to be replaced at great expense. Other companies found ways to make a bang without using disposable heads. Unfortunately the shockwaves were not as effective but that didn't matter so long as patients felt better even though more treatments were required. The alternative methods were called electro-magnetic and piezzo electric. Some of these low cost machines sold well especially to hospitals run by accountants.

The catalogues for these cheap machines quoted energy levels higher than the electro-hydraulic machines and that led to the erroneous belief that higher energy was better. In fact the energy was needed to propel an inefficient shockwave and had nothing to do with the benefit for the patient.

CellSonic traces its origins back to the early Dornier machines and the first lithotripter in Britain at St Thomas' Hospital in London. When the opportunity came to make its own machine, CellSonic knew that it had to be electrohydraulic to be the most efficient. The decision was taken to licence the development and production to Apex Meditech in India who developed the machine entirely alone with the brief to achieve the highest quality first and the lowest price second. The project has taken eight years. At last the CellSonic Medical, hand held lithotripter, shockwave machine is on the market and is superior in almost everyway to anything else.