Werner Forssmann - The Risk Taker

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Werner Forssmann (1904-1979) was a young German physician working at Eberswalde, north of Berlin. In 1929, he was captivated when by chance, he saw a veterinary surgeon pass a long slim tube into the vein of a horse to take blood samples; he wondered if he could pass such a tube up a vein in human heart to give emergency drug treatment, instead of intracardiac injections. He discussed the idea with his colleagues, who thought that this eccentric fellow had gone nuts.

Werner first experimented on a cadaver and managed to introduce the catheter, guiding it up to the right atrium. With the knowledge and capability from this, the next stage would be an animal experiment, but as Werner could not obtain guinea pigs nor attempt such a dangerous procedure on others, he decided to try it on himself. He begged a doctor friend to assist him in the experiment, which he reluctantly agreed. They managed to slide the oiled #4 urinary catheter down the needle, along the elbow vein. After passing some 16 inches, his friend could no longer share Werner's equanimity and thinking that he might kill him, abandoned the attempt. However, Werner was determined and deciding to do it alone, went into the small operation theater the next week. After a local anaesthetic on left elbow, he dissected his own vein and inserted the needle and catheter tube with some difficulty, simultaneously positioning himself behind a continuous X-ray screen. As the nurse held a mirror before the screen to allow him to see the tube in progress, he eased it upwards and slide the whole length of 65 cms towards the right atrium, carefully manipulating it until he saw it enter the pulsating heart, satisfied to see it maintaining its steady rhythm.

Wanting to document the image, Werner then showed the guts, which would shake the most daring person. With the catheter still in place, he walked from the operating room through a long corridor and up two flights of stairs, to the radiology department, waited until several X-ray pictures were taken and slowly pulled out the catheter when satisfied. Werner published his paper (1929), with reference to two X-rays and self-experimentation. Subsequently, he worked in Charite Hospital in Berlin under Dr. Sauerbruch, the renowned thoracic surgeon and Surgeon to Hitler.

During WW-II, Werner was taken POW by allied forces. During this period, Andre Cournand, Dickinson Richards and colleagues at Columbia University, New York, followed up the hints. The technique proved remarkably easy, painless and without untoward effects, in 250 catheterisations. Their work paved way for today's important diagnostic and therapeutic procedures, bringing Forssmann out of obscurity, to share a Nobel Prize with them in 1956.