# Anteriority proof

On the evening of September 24, 1978, at the closing of the 1st International Course on the Multi-electrode Cochlear Implant which had just ended in Paris:

- None of our Australian and Austrian challengers had yet dared to report the clinical results of the systems they had already devised to circumvent the claims of the French patent.
- We were the first and remained so for five years, despite the death at the age of 58 of our industrialist Jean Bertin (*inventor of the aerotrain*).

At the International Symposium on Cochlear Prosthesis held by the New York Academy of Sciences in 1983 :

- We had implanted 48 patients with our multi-electrode implant.
- We had already obtained, in industrial feedback from clinical experience, a reduction in the volume of the initial transmitter device and an increase from 8 to 12 in the number of implanted electrodes.
- All of our patients showed speech intelligibility without lip-reading assistance.
- The sonogram of the deaf from birth was enriched in a few weeks and became understandable.
- No other team present had implanted more than 10 patients.

On the 2 tables below, the anteriority of the Parisian team is demonstrated, as well by the date of the first implementation of a perennial system as in that of the Patent and its extension to the USA.



**Table 1**
First MCI placement.

| Group | 1st placement | Nmb of stimulated channels | Patent date | Public. date | Extension to the USA |
|---|---|---|---|---|---|
| C.H. Chouard | 1976/09/22 | 8 | 1977/03/16 | 1977 | 1980/06/10 |
| G.M. Clark | 1978/08/01 | 2 | 1977/11/03 | 1979 | 1981/05/12 |
| I. Hochmair | 1977/12/16 | 8 | 1979/09/24 | 1979 | 1981/08/18 |

**Table 2**
Sound signal processing.

| Group | Name of the sound signal processing | Nature of the transmitted sound information | Electrical stimulation mode | Higher limit of stimulation rate | First clinical use in MCI |
|---|---|---|---|---|---|
| C.H. Chouard | | Whole range of sound information | Sequential | 300 Hz | 1976/09/22 |
| G.M. Clark | F-0 - F-1 | F-0 + F-1 | Sequential | F-0 and ≤300 Hz | 1978/08/01 |
| I. Hochmair | | | Sequential | ≤10.000 Hz | 1977/12/16 |
| B.S. Wilson | Continuous Interleaved Sampling | Whole range of sound information | Sequential | Often unprecised, but ≥800 Hz (Wilson et al., 1991a) (Wilson et al., 1991b) | 1991 (Wilson et al.,1991b) |

Please cite this article in press as: Chouard, C.H., The early days of the multi channel cochlear implant: Efforts and achievement in France, Hearing Research (2014), http://dx.doi.org/10.1016/j.heares.2014.11.007

The upper sonogram was taken three months before implantation. The lower sonogram shows the progress in the enrichment of the perceived sound varieties brought to the patient by the implantation, after one month of continuous daily operation all day.

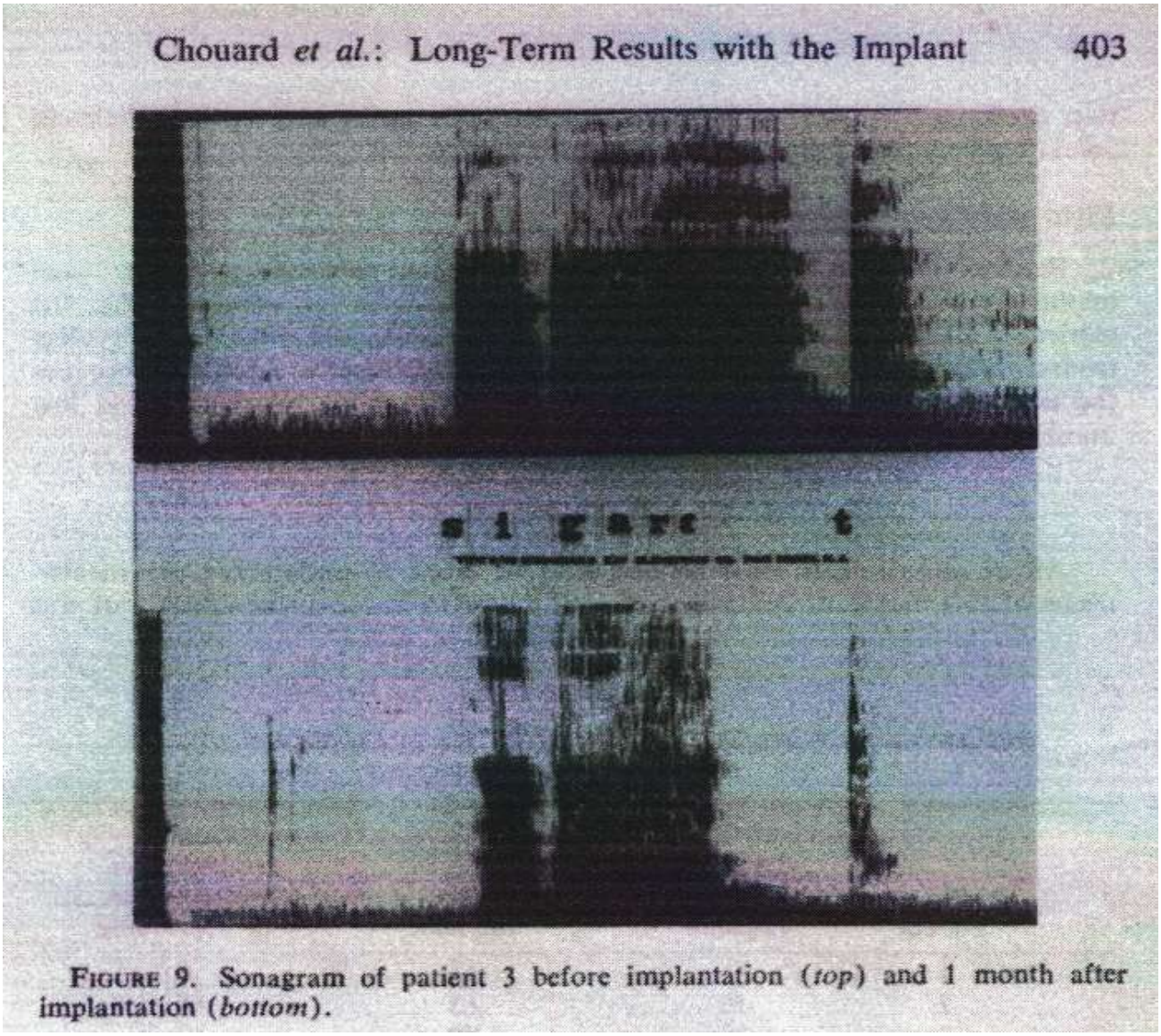


FIGURE 9. Sonagram of patient 3 before implantation (*top*) and 1 month after implantation (*bottom*).

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