

Bedford General  
Hospital (South Wing),  
Kempston Road,  
Bedford,  
ENGLAND.

12th August, 1966.

Dear Dr. Blackburn,

Further to my letter of the 15th July, I am sorry there has been this delay in forwarding you the additional data which I have had copied, as well as the 6 cms x 5 cms multipoint electrode which I am now definitely forwarding separately, together with its rubber band. Much of the data I am enclosing will appear in my paper in World Medical Electronics which will be out this month and I shall, in any case, send you a reprint. I am enclosing a couple of telemetry records, including a tracing during a step test which I took after having had the left multipoint chest electrode continuously in position for 116 days. You will be able to see the type of tracing that we are obtaining in the Cardiac Department using a Mingograf 24B double channel machine and multipoint limb and chest electrodes, from the enclosed Xerox copies. The chest electrode we are using with the Mingograf is an Elmquist suction electrode with a disc of stainless steel nutmeg grater soldered to the base; this is shown in the picture which I am enclosing.

The contact resistance of the limb electrode is lowest when it is firmly applied to hairless skin previously cleansed with ether. The tracings obtained in Palo Alto and in Dr. Hill's Department in London, I think you will agree, are fairly comparable.

You will be interested in the electrocardiogram I took on a horse using the 6 cms x 5 cms multipoint electrode. In this case, because the points on the electrode were so short, I had to clip the horse's hair. My colleague, Dr. Hill, who has been to Houston for the last six weeks, told me the other day that he obtained a perfect E.C.G. on a horse at the university using a stainless steel grater that he had bought from a local store with bigger points and larger holes than the ordinary nutmeg grater. He made a very crude electrode, but obtained a perfect tracing which surprised his colleagues. They then took another tracing using the multipoint electrode plus electrode jelly and there was no difference from the first tracing.

I hope you have received my letter of the 15th July and please let me know if, by chance, the electrode which I am sending by sea does not reach you.

Yours sincerely,



David Lewes, D.M., F.R.C.P.

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