



Spotlight on Special Topics

TELEECG PROGRAM IN A MIDDLE INCOME LATINAMERICAN COUNTRY (CHILE)

Poster Contributions
Posters Hall_Hall A
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Background: Due to the lack of specialists, extensive rurality, and difficulties of access for medical care, a Teleelectrocardiography Project (TM) was launched in Chile in 2003 under the model of a Central Call Center for the whole country, staffed with paramedics and specialists on a 24/7 basis. The number of electrocardiograms (ECGs) received from all over the country, has increased to an average of 60,000 a month, of patients 15 years of age or more.

Methods: Reports are made using a software displaying a 12 leads ECG, and an amplified D2 for measurements. A complete list of diagnosis is presented from which the specialist selects the appropriate ones just by clicking on them. Artificial Intelligence recognizes presumptive normal ECGs, to be confirmed by the specialist, with accuracy, sensitivity and specificity 89% or more. Reports are audited and corrections have been necessary in 1% of the whole number of exams, as an average. All reports are stored in a data base. During the whole 2018 until September 2019, 1,188,088 tracings were received.

Results: The most important diagnosis, by clinical impact have been: atrial fibrillation 3.06%, subepicardial and subendocardial lesions 0.5 and 0.3% respectively. Type 1 Brugada pattern was diagnosed in 4.6/10000 and Wolff Parkinson White pattern in 9.5/10000 tracings. Normal tracings represent 36.6%. This program has been a strong support for primary care physicians, being the Ministry of Health the main user of the system. TM has been particularly important for the diagnosis and treatment of acute myocardial infarction (STEMI) which according to Chilean law has to be diagnosed within 15 minutes after a patient presents with chest pain suggestive of ischemic origin. Thrombolysis and/or referral to primary angioplasty should be done according to local facilities. Mortality for STEMI decreased 30% after the implementation of this law.

Conclusion: Summing up, the model of a Central Call Center for the whole country has shown to be very effective in terms of a prompt and precise diagnosis and has contributed to an appropriate treatment of cardiac emergencies even in rural places, and it has been replicated in Colombia, Peru and Brazil.