

CARDIOLINE

The Glasgow Program for ECG Interpretation

General overview

The Glasgow program, available from Cardioline, is intended to provide an interpretation of the resting 12-lead ECG in all patient care situations, whether this be in a hospital or primary care setting. It is capable of diagnosing all commonly recognized ECG abnormalities such as myocardial infarction (MI), including acute MI, ventricular hypertrophy, ST-T abnormalities and common abnormalities of rhythm. Conduction defects and other abnormalities such as prolonged QT interval are also reported.

The Glasgow 12-lead ECG Analysis Program, is the product of decades of research and continuous improvement by Professor Peter W. Macfarlane, D.Sc, FESC, and colleagues at the University of Glasgow.

A database of ECGs from healthy neonates, infants and children was established in Glasgow many years ago. This led to the development of criteria for

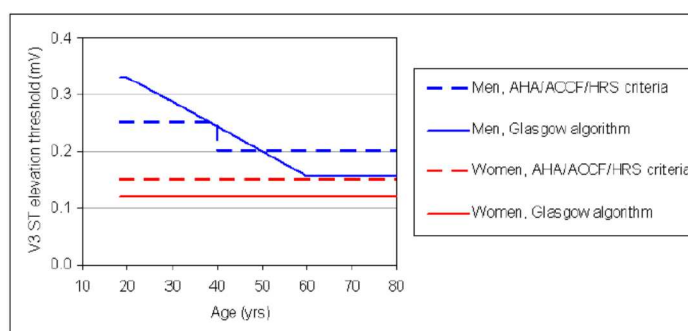
interpretation of the ECG from individuals in that age range.

The neonatal ECG is very different from that of the adult and different criteria are essential.

With the use of the Glasgow normal database and ECGs from patients with known myocardial infarction, the Glasgow criteria were adapted to obtain maximum sensitivity and specificity in the diagnosis of acute ST elevation myocardial infarction (STEMI). The criteria are not only age/sex dependent but lead dependent. Indeed, they vary within one lead

for adult males and females

Versions of the Glasgow ECG analysis program have been adopted commercially initially by Siemens Elema, based in Stockholm, Sweden (now Draeger Medical, Andover, Massachusetts, USA), by Burdick of Deerfield, Wisconsin, USA (now owned by Cardiac Science Corporation of Seattle, Washington, USA), and by Spacelabs Healthcare, of Issaquah, Washington, USA, by Phisio-Control, Redmond, USA, in the area of emergency, and lately by Cardioline (Italy).



Thresholds for ST elevation in lead V3

Main features

- Unique Program of its kind that has been developed within a hospital environment rather than a factory or University.
- Makes widespread use of age and sex in clinical criteria. Has the ability to cope with patients of all ages from birth to old age. The age criteria for neonates is detailed at the level of days. Can utilize V4R for neonates and children. Makes use of race as well.
- Leads the way in the use of age/sex based criteria for diagnosing STEMI
- Uses clinical information if available
- Utilises drug therapy if known
- Critical Values statements highlights ECG findings that may require immediate attention.
- Offers short diagnostic statements for the hospital market or longer statements with reasons mainly for the primary care market
- Meets all the IEC 60601-2-51 requirements. Is still under active development, meeting the ISO 9001 standards.