KARDiVAR and Methodology of HRV

What is actually measured?

How our body provides a control system for the harmonious management levels of the organs and cells?

What are the tools?

The management system of the body

- By trial and error evolution has created our control or management system.
- This can be divided into two areas:

- vertical axis, and
- horizontal axis

- What does it mean?

Our management system consists of different control levels (vertical)

- Vegetative level consists of the activities PS and S nervous system. This level is switched off by the higher centers i.e. hypothalamus
- Vasomotorical center consists of the activities of the PS and S. This level is also switched off by the higher centers.
- The Hormonal axis uses active hormones which effect the PS and S nervous system.
- The higher centres are hypothalamus, limbic system and amygdala.

Sympathetic and Parasympathetic nervous system at each level (horizontal)

- Sympathetic is a catabolic process, a process of destruction, i.e. consumption of energy. It manages the production of energy.
- Parasympathetic nervous system is an anabolic process, a process of reconstruction and regeneration. We store reserves e.g. of energy
- This is like the cycles of summer (predominance of sympathetic) winter (parasympathetic), day, night, breathing in and out.

How do we measure?

- We measure clients sitting down and in a quiet state.
- They should never be lying down because this switches off the baroreceptors of cardiovascular system and we need them to be active during measurement.
- Hands should be still and are laid to rest on the lap.
- Prior to testing the client should be acclimatised to his surroundings for 10-15 minutes and the procedure explained to him.
- The best time to test is on an empty stomach (no cigarettes, coffee)
- We need to know if the client is taking any medication or supplements
- Further test should be taken under the same conditions if possible e.g. same time of day.
- Encourage the clients to relax and breathe properly (beware of conscious breathing)
- The client can watch the ECG and it provides valuable information to the Dr on electrolyte balance e.g. potassium, magnesium,

When HRV cannot be measured

- Any physiological changes in heart e.g. pace maker as this is under the control of this device.
- Some people may have skin that is poor conductor therefore the test cannot be made.
- When the heart is weak and there are extra systoles this may cause a problem with measuring HRV. This is because the heart has to daily re-pump 6.5 tons blood and too many extra systoles long time between R-Rpics.

Disease is the failure at some level ,of the adaptation process.

- Adaptation is a very complex mechanism or process of communication. Non-communication of separate levels of the control system mean that disease is possible. The disease is therefore a failure of the adaptation process.
- The Kardivar can diagnose the structure and dynamics of that communication (center and periphery).
- We measure certain values on the Kardivar against the standard, normal variations which occur in the body when we have a well-tuned receptors.

Good variability is between 30 and 70 ms as the time difference between single pulses

- Reduced HRV means more catabolic activity i.e. sympathetic dominance. All vertical levels of communication can be affected.
- Increased HRV means more regeneration, reserves i.e. parasympathetic dominance in the entire system
- Everything must be in balance in the structure and dynamics of communication. However this balance must be stable and flexible in its communication and not rigid stability.
- This balance is the duality of action v reaction, input v output, catabolic v anabolic activities and control activities.
- This is also the balance between the horizontal and vertical levels.

Other HRV machines

- There are many other devices which measure HRV but they are not able to measure the differences in thousandths of seconds.
- Such devices can not provide the same information as the Kardivar and are not backed up by the years of date provided by the Kardivar software.