An ECG may report the QRS axis (QRSa) and the QRS duration (QRSd). What is the difference?

QRSa (axis) refers to the direction in which the electrical current flows through the heart. A change in the QRSa is more likely caused by a cardiac problem more so than a toxicology problem.

QRSd (duration) is the length measured from the end of the PR interval to the end of the S wave. A normal QRSd is less than 0.1 seconds (100 mSec). There are many medications which block sodium channels in the cardiac conduction system and can cause a QRSd >0.1 seconds. For this reason, poison specialists frequently ask for the QRSd in poisoned patients.

Did you know ……

Garage Hazards

When warm weather is here, it’s nice to be outside and children tend to follow along with dad or mom into the garage. How many potentially harmful chemicals can there be in a garage?

**Hydrocarbons:** These include charcoal lighter fluid, tiki torch oil, gasoline, turpentine, paint thinner and other similar products. Hydrocarbons, if aspirated, can cause severe lung damage and even death. It takes only a small amount to get into the lungs of a child for a tragedy to occur.

**Toxic alcohols:** Alcohols found in the garage can include:

1) **Methanol:** Commonly found in windshield washer fluid and gasoline additives. As little as a few teaspoons can cause blindness and death in small children
2) **Ethylene Glycol:** Typically found in radiator antifreeze. It has a sweet taste and can lead to kidney failure and death if enough has been consumed.
3) **Diethylene Glycol:** This is often found in brake fluid and in very high concentrations. Ingesting these products can lead to seizures, renal failure, and death.

**Caustics:** Caustics are substances that can cause chemical burns like acids (muriatic acid) and alkali (lye) products. These can be found in oven cleaners, grill cleaners, drain cleaners, brick/concrete cleaner, and rust removers. Some caustic solutions may contain hydrofluoric acid, which can cause hypocalcemia, hyperkalemia and arrhythmias, leading to death.

**IPCC Recommendations:**

1) **Keep products in their original containers.** When put into a clear plastic bottle, blue windshield washer fluid looks like fruit juice and antifreeze looks like lemonade.
2) **Store products where children cannot reach them and use locked cabinets.**
3) **Close the container lid tightly and put dangerous products away immediately after using them.**

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