

Diagnostic

Imaging

The incredible complexities of the body's interior – secrets only the surgeon could once examine – are being unfolded today with an array of "bloodless" scalpels.

What began nearly a century ago with Roentgen's discovery of the miracle of X-rays, has exploded into an era in which virtually every organ and its tiniest components can be studied without anesthetic and potentially risky surgery. And

that are essential for function or survival. A patient, for example, suffers symptoms such as the chest pain of angina. This is a signal from a heart not getting enough life-supporting oxygen and doctors may suspect either a blocked artery or one becoming clogged to the point where inadequate oxygenated blood is passing through it.

When an individual suffers a potentially devastating stroke, a critical blood pipeline to the brain may have been blocked. Or, in a more subtle, but potentially stroke-warning transient ischemic attack, the blood flow to the brain may be being slowly cut off. It is vital to identify the source before a disaster occurs.

To help pinpoint the precise location of the blood flow interruption, doctors today have at their disposal many diagnostic imaging tools ranging from the computerized axial tomograph (CAT) scanner to devices known as angiography systems.

A patient with a suspected blockage, receives an injection of a radio-opaque dye which can be observed as it moves along the bloodstream. It will quickly provide an outline of the vascular tree and identify areas of vessel-narrowing or a critical area of blockage.

One such unit is the Angicon system, produced in Canada by Picker International Canada Inc., a major international designer and manufacturer of diagnostic imaging tools, including CAT scanners and standard X-ray machines and their components.

The system makes possible instant filming at any angle of viewing or magnification, and eliminates the "fluoro-to-film changeover" delay inherent in some machines.

The Angicon is a "microprocessor controlled bi-plane angiography system" with a "true see-through film changer", a feature that permits the radiologist a fluoroscopic preview of the area that needs to be X-rayed. This not only speeds up the procedure but results in fewer repeat examinations and, accordingly, less exposure of the patient to radiation.

A video disc recorder makes possible evaluation of the procedure immediately after injection of the dye or contrast material.

The Angicon has "variable pulse fluoroscopy" going as low as 7.5 pulses per second, which also helps reduce exposure of operator and patient to higher doses of radiation common in continuous fluoroscopy devices.

Picker International's other product lines include "cassetteless" diagnostic X-ray fluoroscopic units capable of performing the work of two or more standard X-ray rooms, as well as an automatic chest X-ray system designed around the concept of a vacuum exposure chamber with automatic film transport from a loading magazine.



This angiography system produced by Picker International Canada Inc., is used to obtain diagnostic images of blood vessel activity inside the body for signs of artery narrowing and possible blockages.

it can often be done with minimal exposure to radiation.

It is called "diagnostic imaging". With this marvel, doctors are not only able to pinpoint abnormalities that may or may not require correction, but they can actually view the ongoing performance of an organ system.

The human body needs adequate blood circulation to carry fresh oxygen to its many organ systems