Manual Injection Versus Automated Injection Contrast System

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Introduction

Contrast induced nephropathy is most common preventable conditions in Cardiac Catheterization Lab. The administration of radiopaque contrast media may lead to acute kidney injury.

The risk of contrast nephropathy is much higher with procedures involving in Coronary intervention procedures.

The aim of the study is to provide patient safety by reducing use of adequate amount of contrast media injected to gain optimal imaging through automated injection contrast system.

Automated injection contrast system was started from August 2017 in Cardiac cathlab, Heart Hospital.

Methods

- Changing from manual hand injection to automated injection system
- Comparing the difference of contrast volume used hand injection to automated injector
- Quality of imaging acquired was compared.

Comparison

Good quality of imaging is achieved in power injector

Easy to setup the power injector, time efficient

Reduced risk of air embolism in closed system of power injector

Power injector gives the continues hemodynamic monitoring, which reduces the risk of complication by damping pressure.

In power injector device that allows control of injection rate and amount of contrast to be delivered. Along with post procedural saline strategy and power injector usage, our hospital achieved significant reduction in contrast induced nephropathy.

In power injector, reduction of contrast and saline consumption. For manual injection the complete setup including contrast and saline are disposable for each case. But in power injector SPAT alone will get disposed. So power injector is economical.

Conclusion

There was a significant reduction in the total volume of contrast media used (amount injected to the patient as well as amount wasted) and in the net amount of contrast delivered to the Patient with the automated injection contrast system. When compared to the traditional method of manual contrast injection.

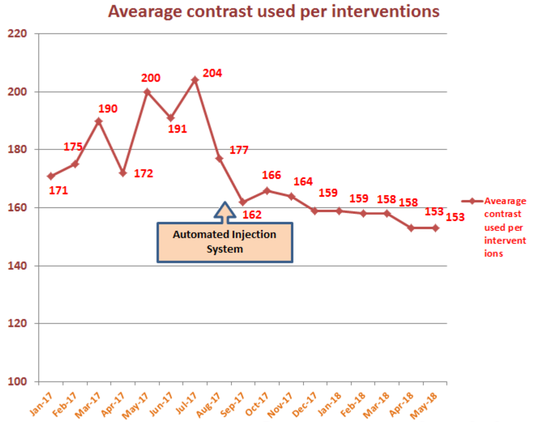


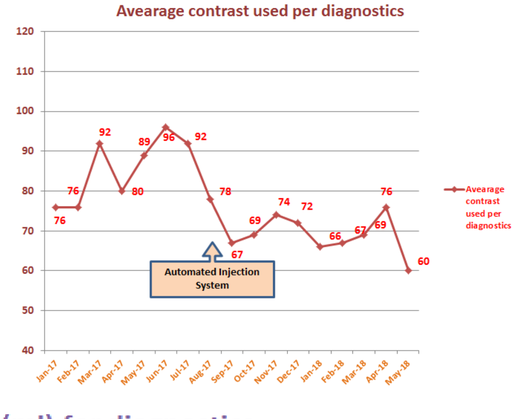
Manual injection setup

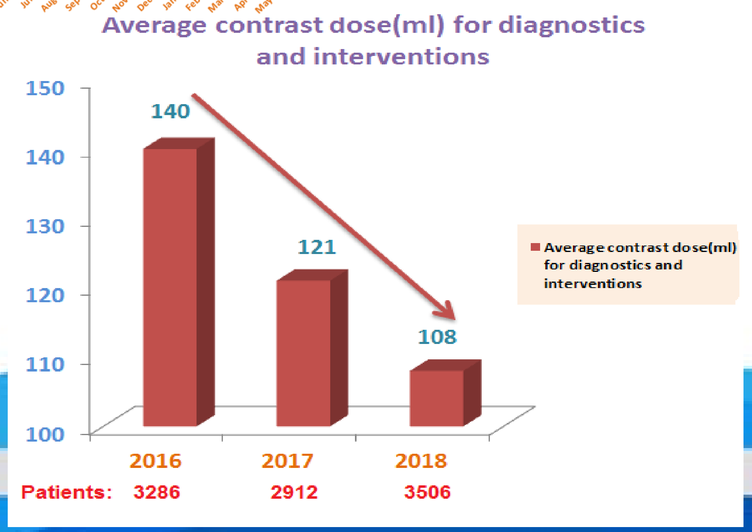
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Power injector







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