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AN INSTALLATION OF APHERESIS KIT PRIMING PROCEDURE HAD MET WITH AN ACCIDENT AND MANAGED PROPERLY.

Immunohematology

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ABSTRACT

I would like to illustrate the observational case report of therapeutic plasma phresis kit installation and priming of kit had met a fall out as consequence of leaked of normal saline. We would like to get notified, regarding an event of priming of therapeutic kits their consequence and best management .This incidence was only managed because of keen observation and following of equipment manual instruction. This information has nowhere documented in any trouble shoot management procedure.

KEYWORDS

Aphresis, Plasmaexchange, plasmaphresis

BACKGROUND AND PROCEDURE

A therapeutic exchange had planned for a patient of myasthenia gravis of 9 years female on COBE Spectra 200x cell separator machine. Machine had been properly main tend and calibrated and ready for running of the procedure.

A random lot of kit was selected checked for 1. Lot no, 2.date of manufacture, 3. Date of expiry, 4. Other keen observation had performed. Machine had decided to run according to instruction guided in standard operative procedure of equipment. Proper kit installations were performed as instructed in sop. Machine had been starting prime with .9 % normal saline ,acid citrate dextrose were chosen as anticoagulant .All priming fluid and anticoagulant were fixed at their required position. Machine alarm had been selected to alert. Machine had started priming first to centrifuge inlet followed by further in lined channel. In the meantime of priming season machine had started alarms of high return access pressure alarms. We had started checking for all reasons. We observed, there had a leaked on kit's saline line circuit at needle site which was connected to fluid container. Might be this had the reason of return access high pressure alarms. Cell separator had denied to maintained next instruction. Cell separator selected himself in auto paused mode. We had fixed the leaked site with adhesive banded. Still we were not able to get off return high pressure alarms .We had taken out the diaphragm of the kit' from the return pressure sensor site. Parts of kit' also had taken out from return air detector chamber slot and return line vale site, which were holding return saline line. We had placed a clamp over the return pressure sensor tubes of the kit. We had opened the clamp over return saline line, diverted the fluid in waste cart. We had waited for emptying of saline fluid from return air detector chamber site. Once chamber of return air detector got empty from normal saline filled fluid, we had made to fixed kits circuit according to their respective belonging site and again clamped the access line, removed the clamped over the return pressure sensor tubes of the kit. Machine had offed the signal of high pressure return alarms. Cell separator had started to prime. Thereafter we were completed the procedure of plasma exchange uneventfully.

DISCUSSION

Apheresis procedure stands (plateletphresis, plasmaphresis/ therapeutic plasma exchange and peripheral blood cell collection). Since many years we are studying adverse events of therapeutic exchange procedure and apheresis procedure. Many studies had suggested so many adverse events had noted in patient of therapeutic plasmaphresis e.g. hypocalcaemia, hypervolemia, anaphylactoid reactions (.2%), cardiovascular events (.2%), respiratory events (.02%) following event noted by Mokrzycki MH et al.[1] Adverse events of apheresis occurs in Donor/Patients. Occasionally adverse events of variable severity may occur during or after the procedure. Some studies have mentioned as a local reaction and systemic reaction e.g. local reaction are hematoma at phlebotomy site or pain, hyperemia and swelling may developed. Very few donors have recorded local phlebitis or thrombophlebitis. While few donors have in systemic reaction e.g. anxiety, dizziness, nausea, hypotension, bradycardia and syncope or citrate toxicity recorded. By McLeod et al-(2.18%), J Philip et al-(2.6%) and GK Patidar et al-(18%) had noted adverse events during apheresis procedure respectively[2,3,4]. while J Philip[4] et al had performed on Baxter CS 3000 cell separator and Haemonetics MCS+ cell separator. Gk patidar[3]etal were performed platephresis procedure on Trima Accel and Amicus (3.2version FENWAL).present study has aim to introduce of cell separator adverse event that was noted under kit installation priming and their best mean time management by transfusion specialist. That define adverse events can occur in patient, donor and machine also.

CONCLUSION

There should be mandatory to training of staff personal how should handle the equipment's. Proper timed calibration and maintained needed for every equipment's.

REFERENCES

1. Mokrzycki MH,,Kaplan AA,.Therapeutic plasma exchange; complication and management .Am J kidney Dis;1994 Jun;23(6):817-27
2. Mcleod BC, Price TH, Owen H, Ciavarella D, Sniecinski I, Randels MJ, et al. Frequency of immediate adverse effects associated with apheresis donation. Transfusion. 1998;38:938–43. [PubMed
3. Patidar GK,RR Sharma RR, Marwaha N. Frequency of adverse events in plateletpheresis donors in regional transfusion centre in North India. Transfus Apher Sci. 2013;49:244–248. doi: 10.1016/j.transci.2013.06.003. [PubMed] [CrossRef]]
4. Philip J, Sarkar RS, Pathak A. Adverse events associated with apheresis procedures: incidence and relative frequency. Asian J Transfus Sci. 2013;7:37–41. doi: 10.4103/0973-6247.106730.[PMC free article] [PubMed]