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SURGICAL SMOKE: INTRAOPERATIVE OCCUPATIONAL SAFETY STRATEGIES

Authors: Patrícia Treviso[1], Brenda Carvalho Peradotto[2], Juliana Vargas Campiol[3], Marcia Cristina de Oliveira Pereira[4], Giovana Abrahão de Araújo Moriya[5], Rafaela Schaefer[6], Juliana Nichterwitz Scherer[7], Flávia Alves Amorim Souza Sales[8]

Institution: University of Vale do Rio dos Sinos (UNISINOS)

INTRODUCTION:

Surgical smoke comes from the use of electrosurgery equipment in tissue dissection and coagulation processes and can be toxic to the health team [1] present in the operating room. This are capable of raising tissue temperature to the point of causing cell rupture and the release of particles in the environment.[2] Signs and symptoms related to smoke inhalation reported by professionals present during the intraoperative period are: headaches, watery eyes, cough, sore throat, bad odors, nausea, drowsiness, dizziness, sneezing and rhinitis.[3 - 4]

METHOD:

Qualitative study. Data were collected from a scientific meeting with nurses specialized insurgical center. The meeting lasted one hour and was audio recorded. the data corpus consisted of:meeting recording. Data were analyzed using the thematic analysis technique. The research project wasapproved by the Research Ethics Committee.

OBJECTIVE:

Identify intraoperative occupational safety strategies related to surgical smoke.

RESULTS:

A group of 21 nurses, from seven Brazilian states participated in the study. Strategies to reduce smoke inhalation and improve occupational safety listed from the study participants' speech: technology to reduce and/or inhale smoke; wear a surgical mask; presence of an exhaust system in the operating room; establishment of institutional regulations; Permanent Education.

Categories: Components of surgical smoke, risks related to the inhalation of surgical smoke and occupational safety measures.
Components of surgical smoke
Presence of hydrocarbons
Presence of the HPV virus
Presence of biological material
Presence of carcinogenic material
Risks and effects for human health related to the inhalation of surgical smoke
Transmission of HPV DNA
Interstitial pneumonia
Hypertrophy and hyperplasia of the bronchioles
Eye irritation
Burning in the pharynx
Nausea and vomiting
Occupational safety measures
Surgical mask and N95 mask
Devices to capture smoke
Link access full study (5): https://doi.org/10.5327/Z1414-4425202100040005

CONCLUSION:

Strategies identified to reduce smoke inhalation and increase intraoperative team safety include technologies to reduce smoke, personal protective equipment, collective protective equipment, establishment of institutional norms, and continuing education.

PERIOPERATIVE NURSING IMPLICATIONS:

The results presented allow greater knowledge about the subject of study, providing subsidies for greater safety of professionals working in SC, especially in the operating room. The nurse, for acting both in the assistance and in the management, needs to know the risks and complications resulting from the inhalation of surgical smoke and, together with the team, propose measures that reduce the exposure of to smoke, in addition to contributing in the elaboration of guiding documents and continuing education, aiming at the safety of those present in the operating room.

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AUTHORS:

1. Patricia Treviso: Doctor in Health Sciences. Professor Nursing College – University ofVale do Rio dos Sinos (UNISINOS). São Leopoldo, RS, Brasil. E-mail: ptreviso15@gmail.com

2. Brenda Carvalho Peradotto: Nursing student - University of Vale do Rio dos Sinos(UNISINOS). Porto Alegre, RS, Brasil. E-mail: bcperadotto@gmail.com

3. Juliana Vargas Campiol: Biomedicine student - University of Vale do Rio dos Sinos(UNISINOS). Porto Alegre, RS, Brasil. E-mail: julianavargascampiol@gmail.com

4. Marcia Cristina de Oliveira Pereira: Nurse at Hospital Beneficência Portuguesa de São Paulo (Portuguese Beneficence Hospital of São Paulo). São Paulo, SP, Brasil. E-mail: mcrisopereira@hotmail.com

5. Giovana Abrahão de Araújo Moriya: Nurse - Member of the board of Associação Brasileira de Enfermeiros de Centro Cirúrgico, Recuperação Anestésica e Centro de Material e Esterilização (SOBECC). São Paulo, SP, Brasil. E-mail: gaamoriya@gmail.com

6. Rafaela Schaefer: Doctor in Nursing. Professor Nursing College – University of Vale do Rio dos Sinos (UNISINOS). São Leopoldo, RS, Brasil. E-mail: rafaschaefer@unisinos.br

7. Juliana Nichterwitz Scherer: Doctor in Psychiatry and Behavioral Sciences. Professor Nursing College – University ofVale do Rio dos Sinos (UNISINOS). São Leopoldo, RS, Brasil. E-mail: JULIANASCHERER@unisinos.br

8. Flávia Alves Amorim Souza Sales: Nurse - Master's student in nursing at University of Vale do Rio dos Sinos (UNISINOS). Brasil. São Leopoldo, RS, Brasil. E-mail: flavia.a.amorim@hotmail.br