Administration of drugs via enteral feeding tubes: survey of practices and elaboration of guidelines.

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BACKGROUND

Loëx medical department is a medium to long-stay hospital for general adult rehabilitative medicine and palliative care. There are ten wards with 27 beds. An important proportion of patients are fed using enteral feeding tubes, because they are not able to eat sufficiently. Administration of solid oral drugs by this route represents a problem for the nursing team, because most pharmaceutical forms which are used must be modified (crushed, solubilized…) before being given. Nurses and physicians are confronted with this problem everyday. They are not always aware of all the existing pharmaceutical forms available and there are no specific recommendations on this subject.

OBJECTIVES

- Survey of current methods of drug administration by enteral feeding tubes in a long-term care hospital department.
- Evaluation of nurses and physicians awareness of the different problems.
- Elaboration of practical guidelines to help improve drug administration.

DESIGN

- To make an inventory of the drugs administered to the patients by enteral tubing.
- In-the-field observations of administration methods.
- Develop a standardised questionnaire for 10 nursing teams and 18 individual physicians to evaluate their perception of the problems.
- Publish administration guidelines.

RESULTS

Evaluation of practices by observation:

- 25/269 observed patients (~9%) had an enteral tube.
- 75 different drugs were used in this way and, on average 5 different drugs per patient (63% were solid forms).
- 11% of drugs administered by enteral tubes were inappropriate (Tab.1).
- Nurses disinfected their hands in 44% of cases and gloves were worn in 31% of cases (fig.1-2).
- Material (mortar, pistil, syringe) was not judged to be clean in 75% of the observations (fig.3-4).
- Water was used to rinse the tube in 69% of cases before recommencing the enteral nutrition, and in only 19% at the beginning of drug administration. The tube was never rinsed between the administration of the different drugs.

Tab.1: Inapropiate use of drugs

OBSERVATIONS			INAPPROPRIATE USE	
Trade name	dosage	number	Not to be crushed	Alternative
Aspirine Cardio ® tb	100mg	1	X	yes
Fluoxétine Mepha caps.	20mg	1		yes
Neurontin ® coated tb	800mg	1		yes
Nexium MUPS ®	20mg	1	X	
Paspertin retard ® tb	21mg	1	X	
Pradif retard ® tb	0,4mg	1	X	
Rivotril® tb	0,5/2mg	2		yes

Fig.1

Fig.2

Fig.3

Fig.4

Perception evaluation using questionnaires (Tab.2) :

- 100% of nurses and physicians answered the questionnaire.
- Results obtained from the questionnaire were globally consistent with observed practices.
- 90% of those who replied mentioned the necessity to create specific recommendations.

Tab.2: Extracts from the nurses' evaluation

QUESTIONS	ANSWERS	COMMENTS
Tube's obstruction	frequent	Rinsing tube could avoid obstruction
Obstruction caused by drug	80% yes	
Obstruction caused by absence of rinsing	60% no	
Lack of knowledge	80% yes	The utility of rinsing between drugs is not known
Lack of time	70% yes	Staff shortage ?
Time estimation per drug	2-3 minutes	Bad estimation ?

Elaboration of practical guidelines:

- The recommendations that were established for drugs used in Loex Department included a general administration. method and advice for specific drugs (Tab.3).

Tab.3 : Extract from the guidelines

CONCLUSIONS

This study highlights the daily problems encountered by nurses when administrating drugs with enteral tubes. Based on these results, practical guidelines were established in the form of a general drug administration method accompanied by a list of recommendations for specific drugs. The impact of these recommendations on nurses practices remains to be evaluated.

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