SANATORIO FINOCHIETTO

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New technologies for improving Hygiene Control of borrowed instruments

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Objetive

Assess the cleanliness of the Hospital's borrowed surgical instruments, and to decrease the number of scheduled surgeries that are cancelled due to their dirtiness, by using new technologies for hygiene control and penalizations.

Methods

Each container as well as the most challenging instrument for cleaning inside it were visually examined using a magnifying glass and a gauze with alcohol.
The material that did not present visible dirtiness was analyzed through a surface protein quantification method Chemdye® PRO1 Micro along with Bionova® MiniPro Auto-reader incubators (Terragene®, Argentina). The swabbing method and the acceptance limit (5 μg/instrument side) were taken from HTM 01-01 recommendations.
The results were traced through Bionova® Traceability Software.
A Dirtiness Rate (DR) was generated in order to perform a temporary statistical monitoring (dirt material/received material * 100).

Results

- A total amount of 3348 containers were received.
219 were rejected due to visible dirt remains (N= 10; 22%) or to protein remains (N= 209; 78%) (Table 1).
- The DR was reduced in 49,6 % (from 9.32% to 4.62%), despite the amount of received material was almost doubled.
- One of the Institutions that included the quantification protein test as part of its washing control reduced its Dirtiness Rate from 26.47% to 0%.
- The surface protein quantification system **allowed the detection of instruments with non-visible dirt**.
- Traceability Software allows to have traceability over institutions responsible for the cleaning.

Conclusions

The application of hygiene controls and their quantitative results generated improvements in the Sterilization Central processes, leading to a strict cleaning control of all instruments and ensuring that they are ready for the subsequent sterilization stage. Although there are still some rejected receptions for some institutions, many of them are from new suppliers of the Hospital, and therefore a permanent cleaning control of the borrowed containers is required. Having a surface protein detection system made it possible to ensure the correct cleanliness of the instruments, not a minor issue when it comes to sterilization. The incorporation of a traceability system allowed the assessment of every Institution and the establishment of a work methodology by documenting all different episodes arising daily. Through this study it is demonstrated the importance of using protein detection methods both in own and borrowed material.

Table 1

Month	Total containers recibed	Total rejected	Rejected due visible dirt	Rejected due protein remains	Dirtiness Rate (DR)
October	365	34	3	31	9,32
November	546	38	1	37	6,96
December	526	36	2	34	6,84
January	624	39	2	37	6,25
February	637	42	1	41	6,59
March	650	30	1	29	4,62
TOTAL	3348	219	10	209	-49,60%