OHP-023

THE INTRODUCTION OF THE OFF-LINE METHOD FOR EXTRA-CORPOREAL PHOTOCHEMOTHERAPY (ECP) IN SIENA UNIVERSITY HOSPITAL (AOUS): THE ECONOMIC IMPACT

Fiori F, Paoletti D, Laudisio C, Castellani C, Gallucci G, Tarantino A, Rossetti MG, Giorgi S, Catocci A
Azienda Ospedaliera Universitaria Senese, Pharmacy, Siena, Italy.

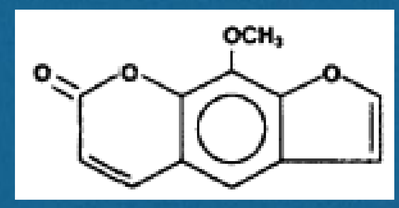
BACKGROUND

Extra-corporeal photochemotherapy (ECP) is a procedure that exposes mononuclear blood cells, which have been obtained through centrifugation, to ultraviolet irradiation, in the presence of the DNA binding agents such as 8-methoxypsoralen (8-MOP). The ECP is mainly used for T-cell-mediated diseases such as organ Graft-versus-host-disease (GvHD). Two methods can be used :

ON-LINE, which consists of the irradiation of cells through extracorporeal circulation. This was the only method used in AOUS until 2011 and now it is used only by Dermatology

OFF-LINE, which consist of the leukapheresis of concentrated lymphomonocitary cells, irradiation and subsequently reinfusion. This method was introduced in AOUS in 2012 and it is used by the blood transfusion center.

Now the 8-MOP is prepared in the galenic laboratory to ensure greater safety for the staff involved.



The UV irradiation of white blood cells in presence of 8-MOP, which allows the formation of crosslinks between adjacent thymine, for this step two photons are requires

THE ECP IN THE AOUS
-Two departments involved:
-DERMATOLOGY;
-BLOOD AND TRANSPLANT CENTER;
-Two types used:
-ON-LINE (Dermatology);
-OFF-LINE (Centre for transfusion and transplantation)
The 8-MOP is now prepared at the Laboratory of Galenic Pharmacy, in sterile fume hoods, in amber syringes, in order to provide security to staff involved

PURPOSE

The objective of this study was to analyze the costs and consumption data of the Medical Devices (MD) necessary for ECP in the period May 2012- May 2013, and compare to the consumption of the previous years to observe the savings obtained.

MATERIALS AND METHOD

We analysed the costs and consumption data of the MDs used in ECP in AOUS, extrapolating from database of the hospital. Then based on the average historical consumption the resources saved with the introduction of the new method were calculated.

RESULTS

During the previous EAHP and SIFO Congress an abstract concerning the off-line method was presented, where an average consumption is 867 kit/year was calculated, with annual cost of 914.081 € (in this abstract the costs had also included UV lamps, now provided free of charge) and an estimated savings of about 55% (€ 409 922) with the transition to the off-line method. In 2012 with the introduction of the off-line method, the prices of kit for the on-line method were also recalculated. In this period (with an average price of 708€ per kit)the hospital has consumed 380 kits with a cost of 269.169€ for the online method and the expertise relate to the off-line method were 62.469€ (250 kits at price of 247,52 €). Overall in the AOUS we have consumed 630 kits for ECP with the cost of 331.637€.

COSTS AND CONSUMPTIONS DURING IN THE PERIOD MAY 2012 – MAY 2013

	Quantity	*Value (€)*
KIT PROCEDURA ONLINE	*380*	*€ 269.169,00*
KIT PROCEDURA OFFLINE	*250*	*€ 62.469,00*
Total	*630*	*€ 331.638,00*

SPENDING AND SAVING HYPOTHESISED IN 2012		
Spesa ON-Line	*914.080,83*	*55%*
Spesa OFF-LINE	*409.922,21*	*of saving*

CONCLUSION

From the analysis of the data we have observed that AOUS had reduced 64% of its costs and of 19% of its consumptions. The savings exceed the reduction in the consumption of kits, and therefore the savings do not stem only from the decrease in the number of kits used, but also from the use of the off-line method and its related cost, as well as the renegotiation of the price of the kit of the on-line method. The introduction of the new method, therefore, has produced a substantial savings for the AOUS.

- ***REDUCTION IN CONSUMPTION 19% LESS THAN IN YEARS PAST;***
- ***RENEGOTIATION OF PRICES FOR THE KIT ONLINE;***
- ***UV LAMPS PROVIDED FREE OF CHARGE***

=

64%

Resources Saved!!!