Clinical pharmacy and clinical trials

One-way sensitivity analysis confirms the stability of the ICER for nab-paclitaxel despite the variations in the cost of taxanes.

Threshold analysis shows that the ICER for nab-paclitaxel exceeds €40,000 only if cost per mg of conventional paclitaxel is set

Probabilistic sensitivity analysis highlighted that nab-paclitaxel has a 0.99 probability of being cost effective for a threshold value of €40,000 and is the optimal alternative from a threshold value of €16.316 onwards.

Conclusions Based on those findings, nab-paclitaxel can be considered highly cost effective when compared to the acceptability range for ICERs proposed by the Italian Health Economics Association (£25,000;£40,000)

No conflict of interest.

CPC-013 ANALYSIS OF ANTIFUNGAL USE AND COST IN A SPECIALIST HOSPITAL DURING THE LAST THREE YEARS (2009-2011)

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MT Gomez de Travecedo, A Almendral, R Gavira, P Gomez, M Lobato, R Gonzalez, MT Moreno, F Gomez, R Gazquez, JP Diaz. Hospital del SAS de Jerez, UGC Farmacia, Jerez de la Frontera, Spain

Background Although antifungals constitute a small part of the antimicrobial drugs used in hospitals, proportionally their cost is high. Therefore, the use of antifungal analysis is important in order to achieve optimal clinical outcomes by appropriate management of

Purpose To analyse antifungal use and cost in a specialty hospital over the last three years (2009–2011).

Materials and Methods Antifungal consumption was analysed in economic terms and number of Defined Daily Doses (DDDs). Data was processed for the whole hospital and broken down by clinical unit. WHO-ATC/DDD Index 2012 was used for DDDs calculations. Results were expressed in DDD/100 Stay-days (DDDs/100SD). Stay-days data were obtained from hospital healthcare activity records. Use data collected were: J02AA-antibiotics antimycotics for systemic use, J02AC-triazole antimycotics for systemic use, and J02AX-other antimycotics for systemic use. Consumption values were extracted from the pharmacy management SINFHOS computer application. DDDs automatically were calculation was made using EDUS SUR application.

Results During last three years, antifungal use expressed in DDDs/100SD was 6.72% of anti-infective drugs used. The cost of antifungals represented 43.59% of the total cost of antimicrobials. 85% DDDs were prescribed by Haematology (105.55 DDDs/100SD), Intensive Care (43.38 DDDs/100SD), Infectious Diseases (12.49 DDDs/100SD), and Oncology (5.92 DDDs/100SD). Antifungal use went up especially in Infectious Diseases, which increased from 7.74 DDDs/100SD in 2009 to 21.72 DDDs/100SD in 2011. Of the antifungal agents, the most prescribed were fluconazole (10.46 DDDs/100SD) and amphotericin B (6,00 DDDs/100SD), followed by voriconazole (1.36 DDDs/100SD) and caspofungin (1.35 DDDs/100SD). The selection of antifungals evolved: fluconazole use increased from 1.31 to 3.71 DDDs/100SD, and amphotericin-B use increased from 1.31 to 2.90 DDDs/100SD, while caspofungin use decreased from 0.63 to 0.33 DDDs/100SD.

Conclusions The cost of systemic antifungals represents nearly half of anti-infective drugs expenditure in our hospital.

Efforts to assure optimal use of antifungals must be reinforced In Haematology, Intensive Care, Infectious and Oncology, by proposing clinical guides or protocols for prophylactic and treatment use.

No conflict of interest.

CPC-014 ANALYSIS OF ANTIRETROVIRAL THERAPY IN ADULT **HIV PATIENTS IN A TERTIARY HOSPITAL**

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¹MP Bachiller Cacho, ¹G Lopez Arzoz, ¹P Pascual Gonzalez, ¹K Andueza Granados, ¹MJ Gayan Lera, ²JA Iribarren Loyarte, ¹P Carmona Oyaga, ¹B Odriozola Cincunegui, ¹O Valbuena Pascual, ¹A Aranguren Redondo. ¹Donostia University Hospital, Pharmacy, San Sebastian, Spain; ²Donostia University Hospital, Infectious Diseases, San Sebastian,

Background Current guidelines (GESIDA/PNS-2012) for antiretroviral therapy (ART) in adults recommend the combination of 3 drugs for the treatment of chronic HIV infection.

Purpose To analyse the ART in adult HIV- infected patients monitored in our hospital.

Materials and Methods A retrospective and descriptive analysis was conducted at the Outpatient Hospital Pharmacy studying the types of ART in HIV adult patients treated on 1 January 2012. Dates were obtained from the electronic outpatient database.

Results 1226 patients were receiving ART. The type of therapy was: monotherapy in 40 patients (3.3%), dual therapy in 37 (3%), triple in 1107 (90.3%), quadruple in 32 (2.6%), quintuple in 7 (0.5%), sixfold in 2 (0.2%) and sevenfold in 1 (0.08%). 156 different treatments were observed with 22 drugs. The most common ART combinations were 2 nucleoside reverse transcriptase inhibitors (NRTI) plus a non-nucleoside reverse transcriptase inhibitor (NNRTI) in 585 patients (47.7%), followed by 2 NRTIs plus a protease inhibitor (PI) in 345 (28.1%) and 3 NRTIs in 75 (6.1%). 43.2% (530) received PI therapy and, mainly, boosted.

The combinations tenofovir-emtricitabine or lamivudine-efavirenz were the most frequently prescribed in 358 patients (29.2%), followed by abacavir-lamivudine-efavirenz in 89 (7.3%), tenofovir-emtricitabine-lopinavir-ritonavir in 80 (6.6%), tenofovir-emtricitabinedarunavir-ritonavir in 74 (6%) and abacavir-lamivudine-zidovudine in 72 (5.9%).

All patients received oral treatment and 3 of them subcutaneous treatment with the T-20 fusion inhibitor. 621 patients (50.7%) received once-daily treatment (49.3%), 604 twice-daily and one patient three doses daily. Regarding the number of dosage forms, 337 (27.5%) patients were taking one, 273 (22.3%) five, 238 (19.4%) three, 77 (14.4%) were taking two.

Conclusions On January 2012, 76% of our hospital HIV patients treated with ART were taking triple combinations of 2 NRTIs + 1 NNRTI or 1 PI.

All patients except one received once or twice daily treatment and 42% took 1 or 2 dosage forms/day.

No conflict of interest.

CPC-015 ANALYSIS OF ANTIRRETROVIRAL TREATMENT ADHERENCE

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E Fernández Díaz, I Loizaga Díaz, Z Pérez España, S Vallinas Hidalgo, FJ Goikolea Ugarte, MJ Yurrebaso Ibarreche. Hospital Universitario Basurto, Pharmacy Service, Bilbao, Spain

Background The effectiveness of antiretroviral treatment (ART) depends on several factors. Non-adherence is the main cause of treatment failure.

Purpose To evaluate ART adherence in our hospital's HIV patient cohort and its effect on the efficacy of ART; as well as to determine the effect of several treatment-dependant factors.

Materials and Methods From July to November 2011, all HIV patients taking ART who came to the infectious diseases outpatients were included. Adherence to treatment was estimated as the (percentage) difference between units of medicines that should have been dispensed and units that were recorded in the Pharmacy

service as having been dispensed in the last year. The following variables were collected: sex, age, daily number of tablets (T), dose regimen (once daily OD, twice daily TD), ART combination with Nucleoside Reverse Transcriptase Inhibitors (NRTI), Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI) and Protease Inhibitors (PI/r), adherence and viral load (VL). A patient was considered to be adherent when adherence was *90%. The ART was considered effective when VL was *50 copies/mL.

Results N = 835, 566 men (67.9%), 268 women (32.1%) Mean age = 46.7 ± 8 years Mean Adherence = $92.2 \pm 11.3\%$ (* units dispensed/units that should have been dispensed) Adherent patients = 76.3% (No. adherent patients/No. patients) × 100 Mean tablets/day, adherent patients = 3.2 (* no. tablets/day taken by adherent patients/No. adherent patients) non-adherents = 3.7 (This means that non-adherent patients take more tablets/day than adherent patients) Efficacy of ART: 89.5% of adherent patients, 70.1% of non-adherent patients Adherents (%) according to: - • Sex: men = 79.3%, women = $69.8\% - \bullet$ Daily number of tablets: 1T = 81.1%, 2T = 82.4%, 3T = 81.9%, 4T = 74.5%, 5T = 6.9%6T = 72.2% and $>7T = 76.3\% - \bullet$ Dose Regimen: OD = 80.2% and TD = $72.2\% - \bullet$ ART combinations: (2NRTI+NNRTI = 80.7%)2NRTI + PI/r = 64.8% PI/r = 89.4%.

Conclusions The success of the ART is considerably higher in adherent patients (89.5%) than in non-adherents patients (70.1%). Simplifying the ART (OD, fewer tablets) is a strategy able to increase the number of adherent patients. Monotherapy with PI/r improves the adherence to ART.

No conflict of interest.

CPC-016 ANALYSIS OF PHARMACISTS' INTERVENTIONS ON INPATIENT PRESCRIPTIONS AND A CONSIDERATION OF THE ROLE OF HOSPITAL PHARMACISTS

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¹Y Cho, ¹HS Kim, ²JY Lee, ³KH Kwon, ⁴YG Shin. ¹Seoul National University Hospital, Pharmacy, Seoul, Korea South; ²Hanyang University, Pharmacy college, Seoul, Korea South; 3Dongkuk University, Pharmacy college, Seoul, Korea South; 4Seoul National University, Pharmacy college, Seoul, Korea South

Background The hospital pharmacist's role has changed steadily and is turning away from dispensing functions toward active involvement in pharmaceutical care. Intensifying verification of the prescriptions by dispensing pharmacists can contribute to improving the drug treatment of many more patients. Therefore, the system of inpatient prescription review by dispensing pharmacists was developed. Collaborative clinical pharmacist services in inpatient care have generally resulted in improved care and interaction with the health care team on patient rounds, patient interviews, medicines reconciliation, patient discharge counselling and follow-up. All these have resulted in improved outcomes.

Purpose The purpose of this study was to examine the record of interventions by pharmacists who didn't use a prescription review programme, the record of interventions by pharmacists who did use this programme, and the record of interventions by clinical pharmacists who participated in rounds. Thereafter, the purpose was to discuss the necessity for a change of role of hospital pharmacists.

Materials and Methods A retrospective study, analysis of intervention records by prescription error, type of pharmacist intervention, the significance of error, chi-square test SPSS v19, p < 0.05. Significance was classified as B2: could have resulted in significant morbidity or mortality if not prevented; B3: low potential for negative patient outcome.

Results The rates of pharmacist intervention in the three groups were 0.3%, 0.4% and 0.7%. Considerably different results were shown in the three groups of records on the types of prescription

error, the type of pharmacist intervention and the significance of the error. The percentages of significance B2 in three groups were 28%, 37%, 80%, and those of B3 were 72%, 63%, 20%.

Conclusions In view of the results so far achieved especially in the significance of error, the role of clinical pharmacists participating in rounds has had a much more significant therapeutic effect on inpatients. The addition of clinical pharmacist services collaboratively in the care of inpatients generally resulted in improved care. Interacting with the health care team on patient rounds, interviewing patients, medicines reconciliation, and providing patient discharge counselling and follow-up have all resulted in improved outcomes. So, continuing efforts on effectiveness of all kinds of hospital pharmacists' work, such as automation of dispensing, are necessary.

Abstract CPC-016 Table 1

Analysis group	Group 1	Group 2	Group 3
Total prescriptions (n)	406,527	421,505	109,628
Prescriptions to be reviewed (n)	310,947	328,481	93,063
Intervention by pharmacist (n)	928	1,247	681
Rate (%)*(intervention/prescriptions to be reviewed/month)	928/310,947 =0.3	1,247/328,481 =0.4	681/93,063 =0.7

No conflict of interest.

CPC-017 ANALYSIS OF SURVIVAL IN PATIENTS WITH ADVANCED **NON-SMALL CELL LUNG CANCER**

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N de la Llama, MJ Agustin, I Cañamares, C Gomez, O Pascual, JM Real, M Uriarte, R Huarte, MR Abad-Sazatornil. Universitary Hospital Miguel Servet, Pharmacy, Zaragoza, Spain

Background Non-small cell lung cancer (NSCLC) accounts for most cases of lung cancer. Approximately 40% of patients with NSCLC present with advanced-stage disease at the time of diagnosis.

Purpose To analyse the median overall survival in patients with NSCLC stage IIIB or IV.

Materials and Methods Retrospective observational study. Patients with NSCLC stage IIIB or IV who started treatment between 01/01/2011 and 30/06/2011. Data source: Patient medical records, oncology programme (Oncowin) and outpatient dispensing record programme (SAVAC and Farmatools). Data recorded: age, gender, age at diagnosis, stage, histology, chemotherapy, number of chemotherapy cycles and number of prior chemotherapy regimens.

Results Thirty patients were included with a median age at diagnosis of 63 years (IC95% 60-66). 73.3% were male. The stage at time of diagnosis was IV in 80% of patients. The most common histology was adenocarcinoma (50%), 30% squamous cell carcinoma, 10% large cell and another 10% other histological type. Platinum-based chemotherapy was the first line treatment in 66.7% of the patients and for the remaining 23.3% it was vinorelbine alone or in combination. Six patients received maintenance treatment, three with erlotinib, two with pemetrexed and one with bevacizumab. The median progression-free survival time was 4 months (IC95% 2.9-5.1) in patients receiving maintenance treatment and 3 months (IC95% 0.8–5.2) in patients who were not given maintenance treatment. The median overall survival time was 6 months (IC95% 1.2–10.8) for patients with maintenance treatment and also 6 months (IC95% 3.1–8.8) in patients without maintenance

Conclusions Platinum-based chemotherapy remains the standard treatment.