

# PHARMACEUTICAL INTERVENTIONS IN OBESE PATIENTS IN HEMATOPOIETIC STEM CELL TRASPLANTATION

C. MONTERO-VILCHEZ<sup>1</sup>, S.CANO DOMINGUEZ<sup>1</sup>, M.J. GÁNDARA LADRÓN DE GUEVARA<sup>1</sup>, M.I. SIERRA TORRES<sup>1</sup>, A.Y. SALMERON COBOS<sup>1</sup>, A. JIMENEZ MORALES<sup>1</sup>.

<sup>1</sup>VIRGEN DE LAS NIEVES UNIVERSITY HOSPITAL, PHARMACY DEPARTMENT, GRANADA, SPAIN.

## BACKGROUND AND IMPORTANCE:

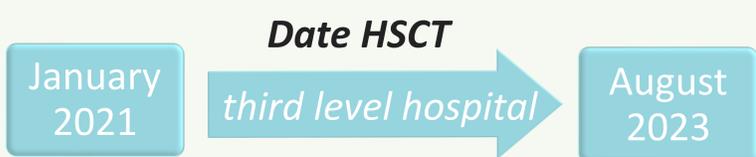
Although obesity is a risk factor of inferior health, it has not been conclusively proven to be associated with worse outcomes in hematopoietic stem cell transplantation (HSCT). Despite the insufficient scientific evidence, the American Society for Blood and Marrow Transplantation (ASBMT) consider that some drugs used in conditioning therapy before HSCT may need dose adjustment in obese patients in order to reduce toxicities, such as gastrointestinal and hematologic toxicities.

## AIM AND OBJECTIVES

The objective of this study is to assess pharmaceutical interventions of dose drug adjustment in obese patients during hospital admission following the ASBMT recommendations.

## MATERIAL AND METHODS

Prospective, observational, unicenter study



Drugs dose adjustment:

Busulfan  
Etoposide  
Cyclophosphamide  
Thiotepa  
Carmustine

Categories – Body mass index (BMI):

BMI <25kg/m<sup>2</sup> – Normal  
BMI 25-29.9 kg/m<sup>2</sup> – Overweight  
BMI 30-39.9 kg/m<sup>2</sup> – Obese  
BMI > 40 kg/m<sup>2</sup> – Severely obese

Dose adjustment:

- Real weight >120% ideal weight  
- BMI >27k/m<sup>2</sup>

Pharmaceutical interventions were carried out for a correct drug dosage.

## RESULTS

154 patients  
HSCT

87 autologous 67 allogeneic

77 (50%) patients  
had been prescribed  
a chemotherapy drug  
requiring weight  
dose adjustment



31,2% (24/77) patients were  
overweight or obese  
Median BMI: 31 kg/m<sup>2</sup>(28-32)



17 (70,8%) medical  
prescriptions were reviewed

23 drug doses were modified after  
pharmaceutical intervention to get  
an appropriate dose in obese

10 busulfan  
6 thiotepa  
5 carmustine  
2 cyclophosphamide

## CONCLUSION AND RELEVANCE

Selecting the optimal dose of conditioning chemotherapy in obese patients is complicated, but the role of the pharmacist is essential to optimize chemotherapy in obese patients receiving HSCT, working with the haematologist in a multidisciplinary team. Further research is necessary to corroborate whether these dose adjustments provide real benefit in reducing toxicity.

