

## USE OF AUTOLOGOUS SERUM EYE DROPS PREPARED IN A HOSPITAL PHARMACY SERVICE

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### BACKGROUND

Autologous serum eye drops (ASED) have been reported to be efficacious in the management of ocular surface disorders as dry eye syndrome and following ocular surface reconstruction. In the Spanish law, ASED are considered a drug and in our hospital the Pharmacy Service is responsible for their preparation.

### PURPOSE

To describe the use, preparation and clinical effectiveness of ASED prepared by a hospital Pharmacy Service.

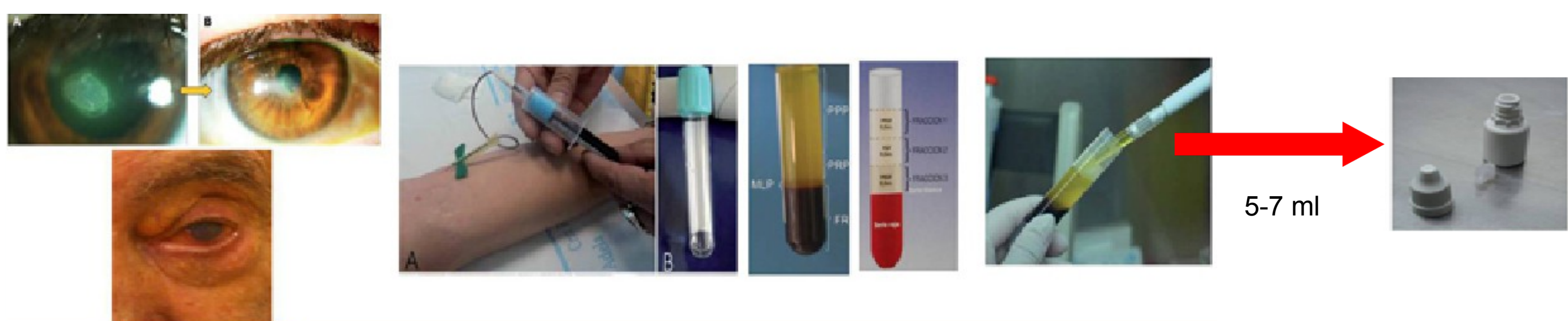
### MATERIAL AND METHODS

- Retrospective observational study.
- Sample: 100% patients treated with ASED.
- Data sources: electronic medical records (IANUS® application) and pharmaceutical records.
- **Analyzed data:** number of patients, age, sex, diagnosis, ASED concentration, treatment time, microbiological controls of final product, serological controls (HBV, HCV, HIV, syphilis), clinical evolution.



#### PREPARATION PROTOCOL:

1. Sterile phlebotomy of the patient blood, allow clotting for 2 hours at room temperature.
2. Centrifuge for 10 minutes at 2000 rpm.
3. Dilute from 20% to 50% with normal saline by using a sterilising filter (0.2 µm).
4. Divide it in 5-7 ml portions in sterile bottles.
5. Check for microbiological contamination, If negative: hand out to patient, if positive: discard.
6. Check for serological controls: if positive: discard patient from use of ASED.
7. Store ASED frozen 3 months at -20°C.
8. Use new bottle weekly and store at 2-8°C.



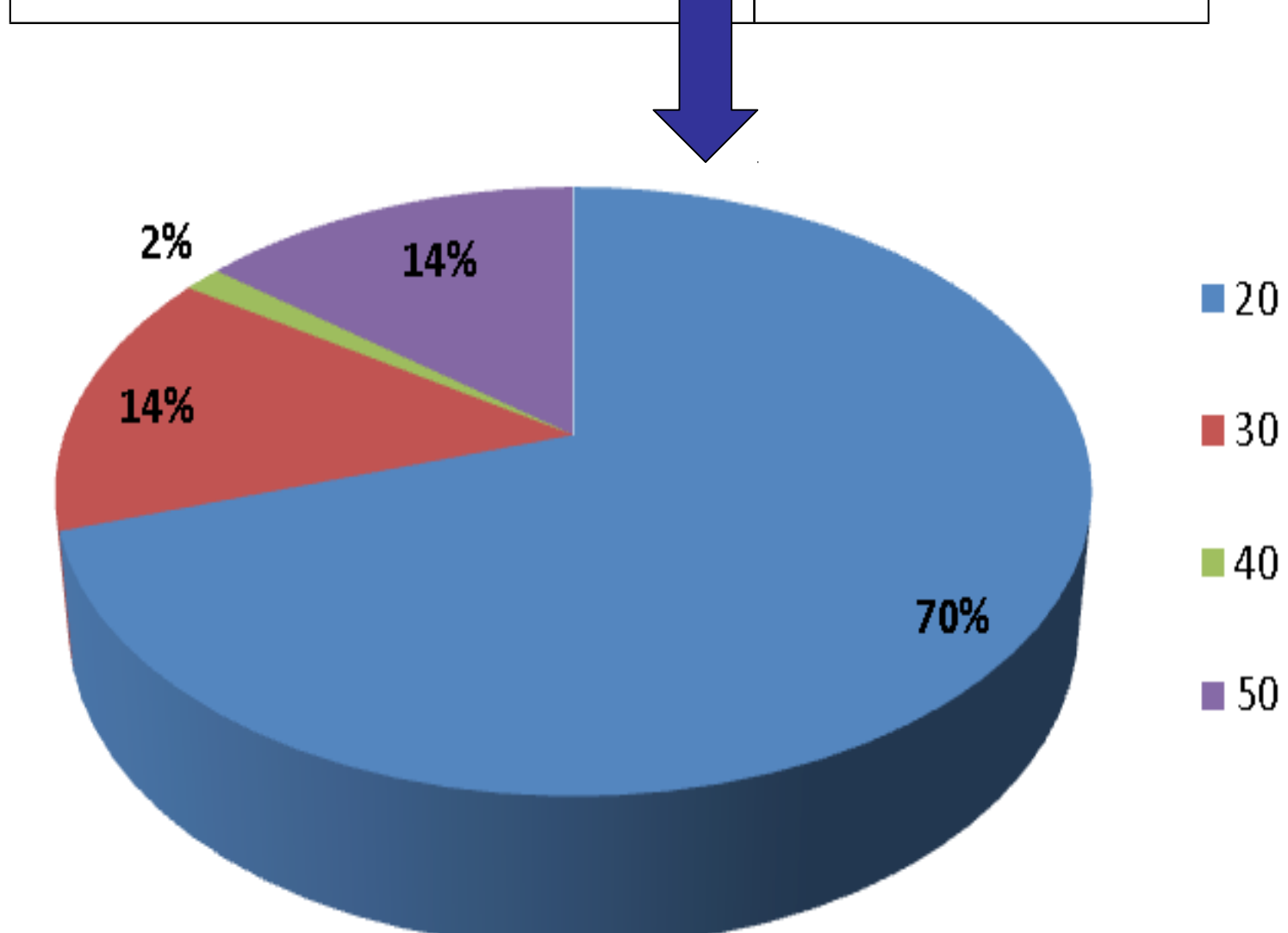
### RESULTS



- ✓ 70 patients.
- ✓ Average age: 65 (29-93) years-old
- ✓ 46 women (65.7%)
- ✓ Usual doses: 3-4 times/day
- ✓ Microbiological controls: 121(0 positive samples).
- ✓ Serological controls: 86(1 positive sample: syphilis  
→Patient excluded from use of ASED and treated with doxycycline).

DIAGNOSIS	Nº PATIENTS
Persistent epithelial defects	26
Severe dry eye	24
Neurotrophic keratopathy	6
Sjögren syndrome	4
Superior limbic keratoconjunctivitis	1
Amniotic membrane transplantation	1
TREATMENT TIME	
1 year or more	28
6 months-1 year	26
Less than 6 months	16
CLINICAL EVOLUTION	
Improvement	29
Stabilization	2
No improvement detected	38

CONCENTRATION	Nº PATIENTS
20%	49
30%	10
40%	1
50%	10



### CONCLUSIONS

- ✓ ASED are useful for severe dry-eye pathologies treatment, but in these patients clinical improvement was only registered in 42%.
- ✓ We believe it is necessary to do an intensive and long-term patients' follow-up.
- ✓ When ASED are compounded using aseptic technique no microbiological contamination was detected.

