# CURRENT STATE OF RETREATMENT OF HEPATITIS C INFECTION IN PATIENTS WHOM PRIOR THERAPY FAILED IN A HEPATITIS REFERRAL CENTRE

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## BACKGROUND

1) The World Health Organization calls for the eradication of Hepatitis C Virus (HCV) by 2030
2) Direct-Acting Antivirals (DAAs) drugs promise:
   1) shorter treatment times
   2) higher cure rates
   3) fewer side effects
3) Still, some patients failed to achieve Sustained Virological Response (SVR) after DAAs regimes
4) Experts recommend retreatment based on an individual decision of multidisciplinary team (MDT)

## PURPOSE

- The aim of this study was to describe the cases of our hospital’s patients who failed to achieve SVR after DAAs regimes

## MATERIAL AND METHODS

- The study of the MDT reports between February 2014 and July 2018 allowed us to identify retreated patients who failed to achieve SVR after DAAs regimes
- Patient information was collected based on analysis of consultations reports of the hepatology department:
  - Age
  - Sex
  - Viral genotype
  - Co-infection with hepatitis B virus (HBV) and / or human immunodeficiency virus (HIV)
  - Cirrhosis
  - Presumed cause of failure of the first treatment with DAA

## RESULTS

- Between February 2014 and July 2018, 385 cases were evaluated by the MDT
- 12 patients were retreated after failure to achieve SVR after DAAs regimes
- Mean age: 57±12 years
- Sex ratio M/F: 1.4
- Cirrhosis: 4 patients
- Co-infected with HBV: 1 patient
- Co-infected with HIV: 2 patients

### Genotypes found in patients retreated

<table>
<thead>
<tr>
<th>Genotype</th>
<th>Number of Patients</th>
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<tbody>
<tr>
<td>1</td>
<td>4</td>
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<tr>
<td>2</td>
<td>4</td>
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<tr>
<td>3</td>
<td>2</td>
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<td>4</td>
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### Molecules used for first DAA treatment

- NS5B+NS5A inhibitors: Sofosbuvir+Daclatasvir (n=3)
- Sofosbuvir+Ledipasvir (n=2)
- Sofosbuvir+Velpatasvir (n=3)
- NS5A+NS3 inhibitors: Elbasvir+Grazoprevir (n=2)
- Ombitasvir+Paritaprevir (n=1)
- NS5B+NS5A+NS3 inhibitors: Dasabuvir+Ombitasvir+Paritaprevir (n=1)

- Four treatments were associated with Ribavirine
- Presumed cause of failures for all patients: HCV resistance to NS5A inhibitors
- Other causes of resistances (non-compliance, drug interactions, re-infection, premature discontinuation) have been discarded

### Molecules used for retreatment

#### 2016 - 2017
- NS5B+NS3 inhibitors: Sofosbuvir+Simeprevir (n=2)
- NS5B+NS5A inhibitors: Sofosbuvir+Velpatasvir with Ribavirine (n=1)
- NS5A+NS3 inhibitors: Pibrentasvir+Glecaprevir (n=1)

#### 2018
- NS5B+NS5A+NS3 inhibitors: Sofosbuvir+Pibrentasvir+Glecaprevir with Ribavirine (n=4)
- NS5B+NS5A+NS3 inhibitors: Sofosbuvir+Pibrentasvir+Voxilaprevir (n=4)

- During retreatment, the duration of treatment was lengthened and/or ribavirin was added

## CONCLUSION

- Failed SVR were mainly caused by NS5A mutations
- Second-generation DAAs marketing approval has allowed retreatment of several patients
- Therapeutic strategies for retreatment comply with European Association of the Study of the Liver guidelines
- However, these patients should be monitored closely to evaluate SVR

## REFERENCES AND/OR ACKNOWLEDGEMENTS

- EASL Recomendations HCV 2018