

Effectiveness of clinical nurse specialist & pharmacist led hepatitis C virus infection treatment pathway in a paediatric setting

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Background

The Royal Hospital for Children (RHC) Glasgow is a regional treatment centre for Hepatitis C Virus (HCV) infection in Scotland. Treatment of HCV has evolved rapidly in paediatrics and direct acting antiviral (DAA) drugs are now licensed for the 12-18 years age group and provide a cure in 98% of cases¹ In line with Scottish Government and World Health Organisation (WHO)² targets to eliminate HCV a novel nurse and pharmacist led treatment pathway was introduced

Aim

Our aim was to offer all HCV infected young people 12-18 years of age attending RHC HCV treatment via a nurse and pharmacist led treatment clinic. The most common acquisition of HCV infection in children is mother to child transmission (MTCT)³ and genotype 1 (G1) is the most common genotype seen in this paediatric population.

Method

Treatment eligible young people were identified from our database of current patients and offered a pre treatment appointment with the clinical nurse specialist (CNS) and pharmacist to discuss treatment.

Clinic interventions

- Liver assessment
- Fibroscan - a non invasive assessment of liver fibrosis conducted in paediatric clinic by CNS – RHC only paediatric centre to offer fibroscan in paediatric setting



- Baseline bloods
- Sexual health advice/contraception advice

On treatment interventions

- Prescription dispensed weekly by community pharmacy - treatment course 8-12 weeks
- Telephone support
- HCV PCR at week 4-6
- HCV PCR at End of treatment (EOT)
- Sustained Viral Response (SVR12) HCV PCR 12 weeks post EOT

Results

10 young people were referred to the nurse and pharmacist led clinic between Jan 2018 and Nov 2018 - 100% attended.

Young people with HCV genotype 1 were prescribed sofosbuvir/ledipasvir (Harvoni)

Young people with HCV genotype 3 were prescribed sofosbuvir/velpatasvir (Epclusa)

10/10 (100%) of young people have EOT response

9/10 (90%) of young people have an SVR 12

10/10 (100%) of young people collected prescriptions weekly

Baseline characteristics	n=10	Baseline characteristics	n=10
Mean age (±SD)	15.4 (2.1)	Route of transmission (%)	
Male (%)	3 (30%)	MTCT	9 (90%)
Treatment experienced	1 (10%)	Other	1 (10%)
Fibrosis Stage (%)		Treatment (%)	
F0-2	10 (100%)	Harvoni	9 (90%)
HCV Genotype (%)		Epclusa	1 (10%)
1a	8 (80%)	Outcomes (%)	
1b	1 (10%)	EOT response	10 (100%)
3		SVR 12 response	9 (90%)
		Lost to follow up	1 (10%)

Treatment for HCV infection – what our young people told us?

It feels great not have it anymore cos I couldn't talk to anyone about it -17 year old

The tablets were really easy to take and it was only for 8 weeks- 16 year old

Was a bit of a pain having to go to the chemist every week with college and work – 19 year old

Really Happy - 17 year old

Conclusion

Treatment of young people with HCV infection by a CNS and pharmacist in a paediatric setting is safe and effective. Minimal on treatment monitoring and use of telephone consultations encourages engagement. Participation with community pharmacies for weekly dispensing allows for concordance issues to be identified early. All HCV infected young people under care of RHC team have been successfully treated

References

- ¹Kardashain A Pckro P New Direct-Acting Antiviral Therapies for Treatment of Chronic Hepatitis C Virus Infection *Gastroenterology & Hepatology* Volume 11 Issue 72015
²World Health Organisation Combating Hepatitis B and C to reach elimination by 2030 May 2016
³Indolfi G, Resti M Perinatal transmission of hepatitis C virus infection *Journal of Medical Virology* 81 5 2009