Ocrevus in Patients with Renal Impairment

This article responds to your request for information on the use of Ocrevus® (ocrelizumab) in patients with renal impairment.

Roche is unable to provide treatment recommendations for individual patients. Any decision on administering Ocrevus in patient with renal impairment will be a clinical decision, taking into consideration individual risk-benefit. Appropriate clinical caution and monitoring is recommended.

In brief

- There is very limited information on the use of Ocrevus in patients with renal impairment.
- In the pivotal trials of Ocrevus in multiple sclerosis (MS), patients with mild renal impairment were included.
    - No change in the pharmacokinetics of ocrelizumab was observed in those patients.
- There is no experience in MS patients with moderate and severe renal impairment nor for patients receiving dialysis.

Ocrevus dosing considerations

Ocrevus (ocrelizumab) is a humanised monoclonal antibody.[1] Unlike small molecules, antibodies are too large to be filtered by the kidneys and are not excreted in the urine (except in pathologic conditions). Most antibodies, including Ocrevus are cleared by catabolism (rather than renal excretion).[2] Therefore, a dose adjustment is not expected for patients with renal impairment.[1]

Patients with end-stage renal failure receiving dialysis

The efficiency by which solutes, including drugs, are removed by dialysis is affected by molecular weight, and, for higher molecular weight drugs, the type of dialysis employed.[3] Drugs >15 kDa are not removed by any type of dialysis, as they do not cross the membrane.[3] Ocrevus has an approximate molecular weight of 145 kDa and is therefore not removed from the circulation by dialysis.[4]

Patients with renal impairment in Ocrevus clinical trials

Multiple sclerosis

In the pivotal clinical trials of Ocrevus in patients with multiple sclerosis (MS), patients with mild renal impairment were eligible. No change in the pharmacokinetics of Ocrevus was observed in those patients.[5,6] There is no experience in MS patients with moderate and severe renal impairment.

Discontinued trial in lupus nephritis

Mysler et al. investigated the safety and efficacy of Ocrevus in patients with active, proliferative Class 3/4 lupus nephritis.[7] A key exclusion criteria was end-stage renal disease requiring dialysis. Overall renal response rates with Ocrevus were numerically but not statistically significantly superior to those with

placebo. An imbalance in the rate of serious and opportunistic infections in Ocrevus-treated patients led to early termination of the study.

References

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