incubated for 20 h following which the migrated cells were fixed, stained and counted.

**Results** HSCs demonstrated greater migration towards medium obtained from HSCs cultured for 3 days under hypoxic conditions compared to normoxic HSCs (p<0.06). This effect decreased with longer culture times, reaching levels significantly lower than baseline by day 7 for both groups (p<0.0001). In contrast, medium obtained from HSCs cultured on gel matrix under normoxic conditions stimulated significantly higher HSC migration compared to hypoxic HSCs, with a peak effect by day 5 (p<0.0001). Similarly, normoxic KCs stimulated significantly enhanced HSC migration compared to hypoxic KCs (p<0.0001). On the other hand, hypoxic BECs attracted significantly more HSCs on day 1 compared to normoxia, an effect that continued to rise on day 7 (p=0.002).

**Conclusion** This study demonstrates that hypoxia in an in vitro model stimulates contrasting responses depending on cell type and activation state. KCs and qHSCs in a relatively high O2 state similar to that of reperfusion during liver surgery can promote chemotaxis of HSCs possibly through the formation of reactive oxygen species. BECs and aHSCs appear to produce factors that negatively affect HSC chemotaxis as evident by below-baseline migration responses. Hypoxia attenuates this negative effect in vitro.

**Competing interests** None declared.

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