

[Ma1, Example 1.3.2]. A Hopf algebra over  $\mathbb{Q}[q^{\pm 1}]$ :

$$\langle 1, X, g^{\pm 1} \rangle / (Xg^{\pm 1} = q^{\pm 1}g^{\pm 1}X),$$

with  $\Delta: (X, g^{\pm 1}) \mapsto (X \otimes 1 + g \otimes X, g^{\pm 1} \otimes g^{\pm 1})$ ,  $\epsilon: (X, g^{\pm 1}) \mapsto (0, 1)$ ,  
and  $S: (X, g^{\pm 1}) \mapsto (-g^{-1}X, g^{\mp 1})$ . Has  $S^2 \neq 1$ .

## References.

[Ka] C. Kassel, *Quantum groups*, Springer-Verlag GTM **155**, Heidelberg 1994.

[Ma1] S. Majid, *Foundations of Quantum Group Theory*, Cambridge University Press, 1995.