15. $\displaystyle\int_a^x \big\{\cosh[\lambda(x-t)]-1\big\}y(t)\,dt = f(x), \qquad f(a) = f_x'(a) = f_{xx}''(x) = 0.$

Solution: $y(x) = \dfrac{1}{\lambda^2} f_{xxx}'''(x) - f_x'(x).$

Reference

Polyanin, A. D. and Manzhirov, A. V., *Handbook of Integral Equations*, CRC Press, Boca Raton, 1998.