Pattern in optimal policy:

The number of chips we should put increases as we have more chips, peaks and decreases to 1. Then it increases again, peaks again, decreases again. This triangle pattern keeps repeating.

Explain:

At first, we have almost nothing to lose. We should put as much chips as possible, but should keep 1 chip in case of incorrect choice. Once we have enough chips to make a safe margin, we dropping the optimal chips in order to keep this safe margin. This pattern of creating margin and securing margin keeps repeating and we can eventually reach N coins.

When we have many chips, we have a very high chance of winning. We should set the number of the chips such that if the dice outcome choice is correct, the number add up to 100. Anything higher than this has no additional benefit but we might lose more if the choice is incorrect.

What make it optimal:

Since we are more likely to guess the dice incorrectly, we should try to minimize the loss in these incorrect guesses. This pattern guarantees that we will not fall too far.

Also, there are some outliers, so we can explore sometimes instead of only exploit the patterns.